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Therapeutic Gazette.

Old Series, Vol. VI. | Detroit, April 16, 1883. | New Series, Vol. IV. No. 4

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Original Department.

Sulphate of Quinine; a Brief History of its Physiological Action.

By Linnæus B. Anderson, M. D., Norfolk, Va.

HAVING followed the physiological history of cinchona bark, as recorded in the leading authors from the date of its discovery to 1820, I now present a condensed history of its salts, as derived from the same sources, since that time, hoping thereby to arrive at some satisfactory solution of their *modus operandi*, as well as the pathological conditions in which they are indicated.

Dunglison on New Remedies, p. 512, et seq.: Quinia is a most important gift from modern analytical chemistry to medicine. The honor of its discovery belongs to Pelletier and Caventon (1820). According to Caventon, quinine produces on the animal economy effects similar to those caused by coffee, and Whitmann affirms that the sulphate induces an excitement similar to that of a paroxysm of fever. Herschel, too, affirms that it has produced coldness, followed by excitement and a sweat, similar to a mild attack of fever. In large doses it appears sometimes to act as a narcotic. Dr. Thos. Feru, who gave it largely, esteems it to be more a narcotic than a sedative—a stimulant in small doses, but a sedative in large, in which opinion Dr. A. Flint appears to coincide. Dr. Scott took two grains, gradually increased to twenty, three times a day. Until the doses were increased to fourteen or sixteen grains, he experienced no peculiar effects, but he now began to feel heat of skin, dryness of the mouth and fauces, and obstinate constipation; he likewise lost the power of naming substances; was obliged for a long while to think what familiar substances were called. His perceptions of quantity were also impaired so that in prescriptions he wrote drams for ounces, etc. He persevered, however, until he reached twenty grains three times a day,

when untoward symptoms arose, so that he was often unable to stand. M. M. Trousseau reports a case in which the remedy produced buzzing in the ears, diminished sensibility, giddiness and vomiting—he was, in fact, in a state of intoxication. In impressible individuals, quinine in even moderate doses not unfrequently induces a sense of anxiety, restlessness, vertigo, confusion, depravation of vision, tinnitus aurium, and in many cases transient deafness, all of which appear to be of a neuropathetic character. Serious and fatal results are reported by French physicians from seventy or eighty grain doses of quinine in rheumatism and amaurosis. It is used in various diseases, but especially applicable to intermittent forms of disease. It is inferior to the bark in tonic and antiseptic powers.

Eberle's Mat. Med., and Practice of Med., p. 276: The sulphate of quinine is, without doubt, the most valuable preparation of cinchona we possess. Experience has fully demonstrated its powers in intermittent fever and other periodical affections in which we usually administer tonics. In general debility and relaxation it does not, however, appear to be equal to bark in substance. Occasionally it acts strongly upon the alimentary canal, producing violent purging and vomiting. In general its stimulating properties are much more active than the bark. A full dose is usually followed by a manifest increase of the heat of the surface, and a feeling of fulness and tension in the head. Its tendency to determine the blood to the brain is, indeed, very considerable. When full and frequent doses are taken, the countenance generally becomes flushed, and the vessels of the head turgid, attended with a sense of confusion, heaviness of the head, and ringing in the ears. I have seen three cases so violent as to give rise to a delirium like that excited by stramonium.

Dewees' Practice, p. 103: We again declare that in our opinion most of our failures with quinine in intermittent fever have arisen from the use of an impure article. We have already glanced at the advantages we possess in quinine over the bark, and, we may add, its exhibition is much more certain, it is less offensive to the taste, it sits better on the stomach, and is much less liable to run off the bowels. The bark in all its forms is admitted by everybody to be an extraordinary remedy, but it is equally true that it requires a certain condition of the system to insure its success, and that condition is, an entire freedom from inflammatory action. Therefore, when this state of the system has been overlooked or not sufficiently attended to, we often find intermittents converted into remittents, or the force of the disease falls upon the abdominal viscera to the ultimate destruction of the patient.

Elliotson, p. 266, et seq.: It is impossible to say how intermittent fever is cured by the specifics used in its treatment. Some have contended the bark, for instance, only acts by irritating the stomach, but if this were the case, brandy and cayenne pepper would do as well, and so would corrosive sublimate. Nor can I conceive that specifics operate by strengthening the system. We might give a person full diet, and undertake to strengthen him in every way, and yet we would not cure the disease, while a few grains of sulphate of quinine will. I cannot say how it is that remedies act in curing the disease, but of this I am satisfied, it is not what people pretend it to be. They do not cure by strengthening, nor stimulating, or any such thing. We can only say, there is a peculiar state, and that remedies cure it by a peculiar operation. I have given quinine in all stages of fever and during inflammation, and I have never seen it do harm. It cannot be given in gastritis. Whenever complaints assume an intermittent form, whether they be aguish or not, quinine and arsenic are the very best remedies, though I have never failed with quinine. Dr. E. is a great enthusiast in the use of this remedy.

Armstrong, 2 vol., p. 136, et seq.: I have never failed in but one case with sulphate of quinine in intermittent fever, and that was complicated with organic affection of the liver. When quinine fails, I use arsenic, and in obstinate cases I combine them. He does not give his views of the physiological action of quinine, but states that persons are often cured of intermittent fever by the confidence inspired in their efficacy. This he illustrates by an amusing incident in the life of Lord Chief Justice Holt, who was called on to try a woman charged with being a witch. She made no other defence than that she had a certain ball which infallibly cured ague. And on investigation, it appeared that the justice, when a young man, had gathered herbs and with much ceremony enveloped them in a roll, wrote strange figures on it and suspended it around a young girl's neck who was ill with ague, telling her it would cure her. She never had another attack, and had often used it on others with like success.

Mackintosh, p. 96, et seq.: The sulphate of quinine is the greatest improvement in modern pharmacy and affords sufficient proof of the virtues of the agent from which it is extracted. Yet this remedy, all-powerful as it is, is useless in the cold stage, and must fail in cases complicated with organic disease. No means hitherto devised can be universally successful. I must charge you to beware of quinine if the patient have fever, oppression at the præcordia, or has a loaded tongue; it should be given in the intervals of fever. Dr. Lerminier says he gave several patients quinine in moderate doses, in whom troublesome nervous symptoms, such as palpitation of the heart, oppession, the globus hystericus, general uneasiness, flying pains in different parts of the body and abdomen, were produced.

Copland, Vol. 1, pp. 1094–1096: I regret the necessity of condensing the views of Dr. Copland, whom I esteem the most methodical, philosophical, scientific, able and practical writer, whose effusions adorn the pages of medical literature. He says (in brief): "Having removed local congestions or general plethora by depletions, and evacuated morbid secretions and fecal accumulations, the sulphate of quinine may be given to prevent the return of the fit. These are almost indispensable preliminaries to the bark or quinine, especially in the congestive or complicated forms; for without them it will either not be retained on the stomach, or, if retained, will convert congestions or slight forms of inflammatory irritation into active inflammation or structural change. Inflammatory or congestive complications do not contraindicate its use, if the requisite evacuations have been practiced; for, in ague, especially, the almost simultaneous employment of depletions, purgatives and quinine are often both appropriate and beneficial. It may often be used endermically, and being thus absorbed into the circulation, it acts

upon the organic nervous system—restoring and equalizing its energy.

Holland, pp. 205–206: But in the first place, I must refer to one of the most remarkable facts in pathology, viz.: the great variety of forms which simple intermittent fever assumes, not merely by change of type as they are termed, but still more singularly by affecting particular and limited parts of the body, with equal regularity of interval. In illustration of the mutations which occur in the progress of intermittent diseases several cases are given: of a man who had intermittent fever, brow ache, and pain in the knee each following the other and all marked by similar regular intermissions; of a brother and sister, having regular recurring pains in the lower jaw; of one having large and painful swelling of the tonsils, subject to regular intermission; of several cases of conjunctivitis regularly occurring at stated hours in the afternoon; of others affected with regular fits of coughing; of one who had a periodical pain in one and then the other arm, with a difference of 10 beats per minute in the pulse in the other arm; all cured by quinine.

Neligan (Mat. Med.), pp. 379–380: The employment of quinine is indicated in all cases of debility unattended with indications of inflammation or active hæmorrhage, provided the stomach and digestive organs are not in an irritable state. It is peculiarly serviceable in debility and relaxed muscular fibre. Its principal use, however, is as an antiperiodic. In all diseases assuming an intermittent or remittent type, it is found to be the most efficacious remedy which, as yet, has been discovered. In neuralgic affections, rheumatism, headache, amaurosis, etc., it has been found to be as beneficial, as in intermittent fever. It has been found beneficial in some inflammatory affections occurring in old and debilitated persons.

Biddle, p. 95: Sulphate of quinine in large doses produces headache, ringing in the ears, vertigo, amaurosis, deafness, delirium, and other evidences of a powerful action on the cerebro-spinal system.

Griffith, Med. Bot., p. 380: Cinchona and its preparations are universally admitted to be the most powerful and effective of all the vegetable tonics. When taken in moderate doses, and repeated in a few hours, it causes increased force and frequency of the pulse, augmented heat of the surface and an improvement of the tone of the system generally. The digestive and assimilative functions are increased, but the secretion of mucus is lessened generally, and in most persons constipation is produced, though the opposite is sometimes the result. It is prescribed as a tonic where debility exists, but more especially to arrest attacks of intermittent and remittent fevers, neuralgia, etc. Its *modus operandi* is only conjectural.

Pereira, 2 vol.: In giving the physiological effects of the bark, its alkaloids and salts, he says the operation of the latter are so similar to the former, it is needless to repeat. In regard to that, he says: taken in moderate doses no obvious effects are produced, though perhaps some thirst, or some temporary excitement of the appetite or disorder of the stomach, may be brought on. If the dose be increased the alimentary canal becomes disordered, a febrile state of the system is set up and the cerebro-spinal system is disordered. Where there is debility without local irritation, it improves the appetite, promotes digestion, and increases the strength of the pulse, the muscular system acquires more power, and the person is capable of making more exertion, both mental and bodily, the tissues become firmer, and the blood is probably improved in quality. It increases tone of muscular fibre, augments the cohesion of the organic mass, counteracts a tendency to liquefaction and disintegration, increases the crases of the blood, and augments the vital energy of the sensible system, restoring sensibility, and the reaction of the nervous system to its normal state and augments the influence of this system on the muscular fibre, etc.

Headland, p. 142, et seq.: It is ascertained that many if not all the diseases in which quinia is found to be of use, are connected with a derangement of secretory functions of the liver. It is possible, Dr. Watson states, that in New Zealand, the biliary system suffers so much in the intermittent fever, that the inhabitants call it gall-fever. May not quinia, which so resembles taurine, the reabsorbed principle of bile, and which is eliminated in these disorders, supply the deficiency of that agent, and thus produce it beneficial effects?

Watson, pp. 417 and 418: Summing up the physiological action of intermittent fever remedies, Dr. Watson says: some of the remedies of this mysterious disease act rather upon the nervous system through the mind. Hence it becomes probable that the drugs which have such power over the disease act also on the nervous system through the body. And hence also we derive a confirmation of the opinion that the disease itself is essentially a disease of the nervous system. Many cases have been cured by strong mental emotions, fright, fear, hope, rage, excitement of various kinds, impositions, charms, etc.

Barlow, p. 495: During the intermission of fever, remedies are to be employed to eliminate the poison, or counteract its effects, and prevent the return of the paroxysm, and for these purposes, more especially the latter, tonics have been found most efficacious, and of these, sulphate of quinine is recommended in twelve-grain doses before the paroxysm.

Billings, p. 97, et seq.: Quinine will frequently irritate the stomach and cause sympathetic headache, through the par vagum, without any danger or determination of blood to the head. Quinine, iron, etc., are the most reliable of all tonics. When we speak of medicines as tonics, we must consider their moderate effect while they are acting on the natural power of the organs, and not their exaggerated or poisonous effects. Often it is the case that the state of the disease causes deception as to the nature of an agent, for in inflammation, which makes the pulse weak from its severity, brandy, by increasing the inflammation, would weaken it still more; while sometimes, on the other hand, sedatives, as digitalis, antimony, bleeding, etc., raise the pulse by relieving the inflammation. Hence medicine is filled with apparent contradictions, the same medicines acting at one time as stimulants, at another as sedatives. Thus brandy and wine in moderation act as stimulants upon the nerves of the stomach and other organs in a healthy state; in too great quantities there is a noxious effect on the organs, their natural susceptibilities being perverted, and a sedative effect communicated to the nerves of the heart, so that a person intoxicated will become sick, with a cold sweat

and a weak pulse, though wine and brandy are stimulants.

Marshall Hall, Prac. Med., p. 271: The functions of the stomach and bowels having been restored, in intermittent fever, the next object is to prevent the next paroxysm. To accomplish this the use of quinine in two—or three-grain doses, every hour or two, is the most effectual means. And to prevent a recurrence of the attack, a mild nutritive diet, a moderate quantity of wine and quinine, and guarding against night air, cold, damp winds, or exposure to northeast winds, etc., are the principal remedies.

La Roche, p. 480, et seq.: The experiments of Briquet prove that when quinine is thrown into the blood vessels it produces cerebral congestion and general convulsions. When it penetrates the brain in an indirect manner, there is first a certain amount of general agitation, then debility, headache, vertigo, tinnitus aurium, paralysis of the acoustic nerves, intolerance of vision, burning sensation in the orbits, weakness of sight, dilatation of the pupils, and blindness, numbness of the skin of the face, subsultus tendinum, trembling of the limbs, an appearance of intoxication, then a general collapse and loss of muscular power, etc. In large doses the experiments of Briquet demonstrate that quinine will often produce engorgement of the lungs, disury, uterine hæmorrhage, gastritis and enteritis. It is universally admitted to be injurious when there is gastritis, enteritis, or arachnitis. It can only be given with safety during the progress of fever complicated with inflammation when there is a decided intermittent tendency. The views of many physicians are quoted from the South and Europe, attesting the fact that quinine acts as a sedative in fevers, uncomplicated with local inflammation, when there is a tendency to remission, and that it is unsafe to give it under any other circumstances.

McGowm, pp. 220, 221, 222: A brief notice of the virtues and influences of quinine on the system may be desirable in view of the great importance of the remedy and the prejudices against it, entertained by some, and the too enthusiastic employment of it by others. Dr. Holmes, of Florida, says: Quinine, as a remedy for periodicity, is to be given regardless of any existing inflammation. Never give it in divided doses. To be certain of its effect on the system, give it eighteen hours before the expected paroxysm. In extreme cases it may be given in the lowest state of prostration or the highest grade of fever. As a general rule, fifteen or twenty grains will be necessary for an intermittent, and double that for a congestive fever. The immediate effect of large doses of quinine are buzzing in the ears, partial deafness, which often continues for twenty-four hours; a great sense of fulness about the head, and often a dull pain across the forehead; there is more or less delirium or mental excitement. I have seen persons under the effects of quinine, wander and talk incoherently, as if from the influence of alcohol. One patient I knew was made perfectly insane. I am by no means persuaded that quinine is a harmless agent and may be given in almost any quantity without producing hurtful consequences. When pushed too far, painful fulness of the brain, alarming sounds and ringing in the ears, deafness, delirium, twitching of tendons and hiccough, will be some of the consequences. Caution must therefore be observed not to push this valuable remedy too far. Overwork the brain and the vital powers may become exhausted by too long continued and excessive action. In this way frequently repeated heroic doses of quinine exhaust the vital powers, cause indirect debility, and thus hasten that very collapse which quinine, judiciously administered, is so well calculated to avert. Twenty grains of quinine may be given with great benefit in a collapse, but when reaction is established, one grain may be sufficient, and even that may be hurtful. If quinine be given in large doses during an open febrile excitement, it acts as a powerful sedative in controlling the fever. But when pushed too far sounds like thunder, burst in the brain, restlessness, anxiety, thirst, oppression, sinking, with other alarming symptoms often supervene.

Goss, p. 74: While the preparations of cinchona are valuable in certain stages of this disease (intermittent fever) they are not specific against it, and had better be dispensed with in many cases rather than be indiscriminately used in all cases as they have been. For the simple element of periodicity as an antagonist against the malarial poison, we may use the sulphate of cinchonia or cinchonidia in two-grain doses, say every hour, till five or eight grains are given.

Trousseau, Therapeutics, Vol. III., p. 121, et seq.: Sulphate of quinine fulfills all the indications of cinchona as a febrifuge, but not as a tonic. Its febrifuge virtues can not be questioned. It is more irritating than bark and more apt to produce gastritis and diarrhœa. Its antiperiodic powers are remarkable, and in all cases complicated with intermittent fever, or in masked forms thereof, complicated or not with local inflammation, quinine in large doses proves a powerful febrifuge. Its *modus operandi* is involved in obscurity. For fifteen years Polli in Italy has contended that paludal fevers were owing to a species of fermentation, and that quinine acting as an antizymotic, arrested the ferment, by destroying the cause and eliminating it from the system, and thus its wonderful therapeutic effects are explained The same theory was taken up by Binz in Germany, who showed by very curious experiments that sulphate of quinine arrests the decomposition of vegetable juices in the open air by its toxic action upon the lower organisms which abound in those substances, amœbæ diffluens, euglena viridis, vorticella companula, etc. We agree with these gentlemen that these very curious experiments may throw some light upon the theory of marsh fever, and the action of quinine, but that it is impossible to prove a satisfactory theory in a scientific manner.

Farquharson's Therapeutics, p 228, et seq.: Quinine in large doses causes curious brain symptoms, such as partial blindness, deafness, ringing in the ears, giddiness, headache, accompanied with a dull heavy expression of the countenance. Binz attributes these effects to anæmia, Hamilton to congestion of the brain, Gubler to its stimulating effect on the great sympathetic, etc. Moderate doses of quinine increase the frequency of the pulse; in large doses it lessens the frequency of the pulse, diminishes arterial tension, and may cause death by sudden collapse, etc. It arrests to some degree the exosmosis of the white corpuscles through the capillary coats in inflammation. In large doses the temperature in fever may be brought down. In small doses it increases the secretions of saliva and gastric juice, but in large doses it has the opposite effect. Quinine in small

doses paralyzes the microzymes gineratia during putrefaction of organic fluids, and in large doses it destroys them. Lanzi and Zerner have found a fungus in decaying vegetable matter in the Roman Campana and in the tissues of the victims to malaria, which they suppose to be the cause of ague and that the beneficial effects of quinine are the results of the destructive powers of this agent over these fungi.

Gubler attributes the benefits of quinine in fever to its effects on the sympathetic nerve; Binz to its antizymotic powers, denying it any neurotic powers, but claiming for it special energy in correcting zymosis in the blood. Quinine is an oxytocic. It has decided stimulating powers. In large doses it is used extensively in Germany as an antipyretic. It is the best tonic we possess. It is a potent agent in destroying minute germs, and hence is recommended in whooping-cough.

Having followed through the most reliable channels in our library the therapeutical and physiological history of quinine from its discovery to the present date, I pause to sum up the medicine, and draw such deductions as the light of science and clinical experience thrown upon my field of observation may enable me.

Sierra Salvia.

By W. A. Gordon, M. D., Hannibal, Mo.

I HAVE just received advance sheets of a "Working Bulletin" for the scientific investigation of sierra salvia, a substitute for quinine. I read the article by Dr. A. Comstock, of Silver Cliff, Col., with no small degree of interest, from the fact that I have been experimenting with the drug more or less since 1876.

In the summer of that year was my first visit to the Rocky mountains, and among other indigenous plants and herbs I brought home a pound or more of mountain sage, and from which I made a pound of saturated tincture. Since 1876 I have spent two successive years—and the hot months of each summer—on the great continental divide, and have been greatly interested in the fauna and flora of that region. I have annually gathered, among other remedies, new stocks of the mountain sage, and administered it to the sick, in infusion and tincture, above timber line, on the plains and in the Mississippi river valley, where malarial fevers are the preponderating diseases; but, as yet, I must acknowledge that I have found but little hope that it can ever be used as a reliable substitute for cinchona bark and its alkaloids. I have now in my office between two and three pounds of the saturated tincture, and about twenty-five pounds of the herb, which I brought from the Pacific slope of the Rocky mountains last summer, and am frequently using it with the view of ascertaining, if possible, its therapeutic individuality. Information obtained from old settlers, soldiers and sojourners through Wyoming, Colorado and New Mexico, may be summed up briefly: that mountain sage tea "is good to break up a cold;" sweetened with sugar or honey, "is mighty good medicine for a cough," and "is the best remedy known for mountain fever." An infusion of the fresh leaves given in the early stages of rheumatism, is regarded as highly efficacious "to sweat out the disease." In nearly all forms of inflammations which cause increased circulation and rise of temperature, we have, as a rule, dry skin and scanty urine; and the same may be said of the simple, continued and eruptive fevers. As a remedy in the early stages of all febrile conditions or from any cause that temporarily suspends the physiological action of the skin or kidneys, I believe the infusion of sierra salvia to be a valuable remedy, as a diaphoretic and diuretic.

I have used this remedy in various forms, such as hot and cold infusions, minimum and maximum doses of the saturated tincture in colds, coughs (bronchial and pulmonary), mountain fever, malarial and typhoid fevers, and rheumatism, in some cases with marked benefit and in others with indifferent success. I think I have obtained more positive results as a febrifuge with an infusion made of salvia officinalis one-third, eupatorium perfoliatum two-thirds, with a little Jamaica ginger to flavor, than I have ever been able to with sierra salvia.

Since August 10th, 1881, I have treated five cases of amenorrhœa with the tincture in twenty drop doses four times a day. Three were from cold, one from nervous shock and one from grief. In the former the shortest period was nine days and the longest sixteen days before the menstrual flow appeared. In the case of nervous shock she had passed one week over the second month when the treatment began, and the menstrual flow was established in seventeen days. In the case of grief the menses were suppressed for two weeks. Twenty drops four times a day caused flow to appear on the eighth day from date of commencing the treatment.

The result of these cases has seemed to me to be from the effects of the remedy. On the other hand, I have failed in three cases where other remedies have been successful.

In three cases of pulmonary consumption when I was using the remedy for night sweats, it produced a sanguineous discharge from the uterus. The tincture was used as follows: Ten drops added to half a glass water from which teaspoonful doses were given every hour until three doses were taken before retiring for the night. The show would increase with the remedy continued every day, and disappear by discontinuing it. From ten days to two weeks were allowed to elapse before another trial would be made; but each time the remedy was administered would be followed by the bloody discharge from the uterus (as demonstrated by the speculum).

I have given it in four cases of dysmenorrhœa with benefit.

A tablespoonful of the tincture to a pint of hot water has produced excellent results in leucorrhœa, where it seemed to be caused by uterine catarrh.

I have cured two cases of gleet with it and failed in three. Two out of the three failures, the symptoms were aggravated with each day's treatment, and one had quite severe chordee. All these cases were taking twenty-drop doses three times a day. The case of chordee was treated with medicated cocoa butter bougies until relieved, when at the end of a week, three-drop doses were again tried, with the effect of aggravating all his symptoms. I now think I gave it in too large doses.

As a remedy in muco-purulent bronchorrhœa, it is valuable. I usually give it in glycerine, flavored with orange or lemon syrup; and in this disease it happily combines with eucalyptus. In phthisis pul-

monalis, it seems to check the excessive expectoration and relieve night sweats.

I think I have had the best results in controlling night sweats of consumptives, with this remedy, of any one in the materia medica, and indeed I believe it will be found very valuable in all types of wasting and exhausting diseases, where colliquative sweats are a prominent symptom to be controlled.

The most successful dose for night sweats I have found to be very small, compared to the quantity used as a febrifuge, or as indicated above. I usually take from two to ten drops of the tincture and add to a tumblerful of water. Of this a teaspoonful is ordered every hour for three or four doses before retiring for the night. If this makes little impression, the next day I lessen the dose to half a teaspoonful, to be given the same as on the previous day. If no marked benefit is derived from half-teaspoonful doses, I continue to diminish until I have demonstrated the fact as to the remedy proving any avail in the case. I had one patient, a blonde, 23 years of age, with phthisis pulmonalis, in which five-drop doses of the above aqueous mixture very effectually controlled her night sweats. I have generally had better therapeutic results from small doses frequently repeated than larger. It is a good tonic, and as such have given half teaspoonful doses of the tincture three times a day. In nervous patients this dose will sometimes produce quite severe headache.

In summing up my little experience with sierra salvia, it seems to act similarly to several of the Artemisia family—a good tonic, emmenagogue—and in infusion acts as a febrifuge by its diaphoretic and diuretic properties. Its primary therapeutic action would indicate that it is: First, on the genito-urinary organs; second, the sudoriferous glands of the integument; third, the mucous membranes.

Note on the Nomenclature of Medicinal Concentrations.

By A. B. Lyons, M. D., Detroit, Mich.

NOTWITHSTANDING the unscientific character as a class of the preparations known as concentrations, the system of names which has been adopted for them is one of admirable simplicity. It is true that it conveys to the uninitiated the erroneous impression that these preparations consist of certain definite chemical compounds, the active principles of the several drugs they represent, of course in a crude form; whereas in fact the concentrations generally claim no more than that they contain those active principles in a somewhat larger, and a more uniform proportion than the corresponding solid extracts. Nevertheless the utility of such a system of nomenclature as that which has been adopted justifies its continued use. Unfortunately, however, the form of the name is one which already has long been employed by scientific men to designate definite chemical compounds, and confusion is likely to arise from this cause when even such compounds are of medicinal value.

As long as the termination "ine" was employed interchangeably with "ia" in designating alkaloids, it was possible to discriminate the alkaloid from the concentration by adopting for the former the termination last mentioned. Thus belladonna furnished the alkaloid atropia, concentration atropia, etc. But since scientific usage has definitely fixed upon the termination "ine" as that to be employed in naming alkaloids, and since the names in this form have now the authority and sanction of the U. S. Pharmacopœia, these is no longer any escape from the difficulty. The names of concentration and of alkaloids as they now stand are dangerously similar in form, and practically identical in sound. Even if there were any assurance that every dispenser of medicines would be a person thoroughly qualified by the necessary education and training for his responsible office, and that every prescriber would be perfectly familiar with the niceties of scientific nomenclature, mistakes would almost inevitably occur now and then, of a serious nature; but in the existing state of things we can expect nothing but that such mistakes will be as frequent as they must be deplorable in their consequences. To guard against the remote possibility of such accidents is an obvious duty resting upon those who have influence in establishing the nomenclature of pharmacy. Unfortunately, the concentrations have sprung into existence in so irregular a manner that no one in particular is at present responsible for their naming; if any change is made, it must come from those who manufacture or those who prescribe these remedies.

The object of this present writing is to offer some suggestions in regard to certain changes which seem to be imperatively demanded. The following concentrations at present bear names easily confounded with those of the alkaloids or active principles they contain: Aconitin, atropin, digitalin, gelsemin, hydrastin, hyoscyamin, lobelin, sanguinarin and veratrin. If these names are retained they should never be used without the explanatory word, "concentration," affixed. The same precaution should be observed by the manufacturers in labeling these preparations, and it would be well if each package carried a caution to prescribers in regard to the importance of emphasizing this distinction.

A better plan, however, would, unquestionably, be to adopt for each of these individual concentrations a name which could not easily be confounded with that of any important constituent of the drug. A diminutive form, or one including the entire name of the drug would be appropriate, as suggesting the relationship of the concentration to the active principle of the plant in the one case, and to the drug itself in the other.

In some cases the specific name of the plant is so well known that this may furnish a name of the usual form which cannot be mistaken in meaning. Or the generic and specific names may be combined in one word. Of course due regard must be paid to euphony, and this must determine in some instances which of the principles just explained should be followed. I venture to suggest the following names in place of those which are now liable to give rise to dangerous mistakes: For aconitin, aconitin, which is otherwise good, is inadmissible on account of the difficulty of distinguishing the written word from the old form. Napelline is already appropriated by science. Aconapellin on the whole is the best name for the concentration.

Belladonnin may take the place of atropin. Although the name might be confounded with that of the second alkaloid of belladonna, practically there would be no danger of mistaking one for the other. Digitalin might be called digipurpurin, but better I

think digitalisin, the name being made to partake of the irregular, not to say unscientific, character of the preparation.

In the same way hydrastin could be named hydrastisin—implying that it represents the total activity of hydrastis—not like hydrastin a part of it only.

The change of lobelin to lobeliin, and of sanguinarin to sanguinariin, would be in accordance with the same principle. Gelsemin perhaps requires no change, the alkaloid being named gelseminin; the form gelsemperin would leave no excuse for mistakes.

For veratrin, verviridin, or perhaps simply viridin would best fulfill the requirements. Hyoscyamin might be shortened to hyoscin, or hyosmin, or it might perhaps be called hyonigrin; I should prefer hyoscyamiin, to either, were not the word already sufficiently polysyllabic.

These suggestions are offered not from any desire for innovation—that is a thing in itself always to be deprecated—but in the belief that they constitute a much needed reformation, which can be effected now much more readily that it can at any future time, provided these concentrations really possess merits which will secure for them perpetuity.

Reports on New Remedies.
From Private Practice.

Kava Kava and Yerba Santa in Gonorrhœa and Cystitis.

By Alfred Fliesburg, M. D., North Branch, Minn.

I HAVE for some time been using the fluid extract of kava kava (piper methysticum) in gonorrhœa, gleet and cystitis, and will give you some of my experience with this drug:

Case 1.—Mr. R. S., æt. 23 or 24, had contracted gonorrhœa about four months previously, and been treated with injections and copaiba mixtures. These remedies had a tendency to lessen the discharge but did not, as he put it, "dry the thing up." Saw me about this time and wanted to know if I could cure him. I told him I could,and prescribed the following mixture:

℞ Fluid ext. kava kava.
Fluid ext. yerba santa, ää gm 60.

M. Sig. One teaspoonful 3 times a day in milk, after meals, and gave the following injection:

℞ Hydrastinæ sulphatis, flav. cgm 50
Sulphato carbolatis zinci, cgm 60
Quiniæ sulph., cgm 30
Acidi sulph. dil. q. s.
Glycerin. purif., gm 30
Aquæ rosar. ad. gm 130.

Sig. Use 3 times a day for injection. He reported himself, in about eight days, as improving, but still not perfectly well. Gave him in addition:

℞ Elixir quin. c. ferri et strych. liq. 3 j.

Three times a day. Cure.

Case 2.—Urethritis and cystitis. Mrs. C., æt. 35. Cause, child-birth and subsequent parametritis. Prescribed:

℞ Fluid ext. kava kava.
Fluid ext. buchu and pariera brav.
Fluid ext. eucalyptus globulus, ää 30 grammes.

Sig. Forty to fifty drops in hot tea three times a day. Improvement commenced after the first few doses. Had previously used acet. potash., spir. æth. nitrosi, and buchu, but found none of these remedies to give so good results as the kava kava and eucalyptus, in combination with the buchu et pariera brava. I may also mention that I used an injection in bladder of "boracic acid and sulph. hydrastin," the strength varying from 10 to 15 cgm. per 50 gram of tepid water. Cure.

Case 3.—Mr. W. B., æt. 50, cystitis, prostatitis. Had many years ago contracted gonorrhœa which he let linger along for quite a long time, finally getting gleet and stricture. From the latter he suffered intense pain at times, and applied for relief from "regulars, homœopaths and advertising quacks." Last summer had been treated by a first-class surgeon and undergone operation (division of stricture) and been advised by him to use No. 12 silver bougie, American scale, which he still continued about twice a week. By examination found no stricture, but the prostate swollen and spasmodic contractions of sphincter urethri. Urine cloudy, acid and voided with mucus and pus, and at times a little blood, especially if passed right after introduction and withdrawal of bougie or catheter. Put him under treatment of:

℞ Fluid ext. kava kava,
Fluid ext. yerba santa,
Fluid ext. buchu,
Fluid ext. par. brav., ää 30 grammes.

Sig. Teaspoonful 3 times a day, after meals. Besides this, was giving him:

℞ Liq. potass., 30.00
Tr. hyoscyami, 50.00
Syr. aurant. q. s. ad. 125.00.

Sig. One or two teaspoonfuls at bedtime in water. Used also to inject into bladder a wash consisting of:

℞ Acidi boracici, 1.00
Acidi benzoici, 0.60
Acidi carbol., gtts. v
Boratis sodii, 2.00
Glycerinæ purif, 10.00
Aquæ tepidæ, ad. 300.00.

Sig. Use twice a day. I kept up this washing out of bladder twice a day for about a week; afterwards told him to use it only once a day. He improved steadily for some time under this treatment, but lastly went away to Chicago and I lost track of him.

I have used the kava kava and yerba santa with fully as good success in other cases of inflammation of the mucous membrane—especially in acute and subacute bronchitis and also in the chronic form. A formula as I have found to do me more service than any other, runs thus:

℞ Codeiæ sulph., 0.06 to 0.10
Potassii iodidi, 5.00 to 10.00
Ext. piper methystici (kava kava) fl.
Ext. eriodyct. Califor. (yerba santa), fl. ää 15.00 to 30.00
Syr. ipecac, 10. to 15.
Syr. senegæ, 30.00
Syr. prun. vir., q. s. ad. 150.00.

Sig. One teaspoonful 3 to 4 times a day.

I have used this or some very similar prescription in over 100 instances and I am pleased to say with unusually good results.

My experience of the value of the two above mentioned remedies has been very satisfactory. The kava kava seem to have at first a stimulating effect,

increasing the secretions of the mucous membranes, afterwards acting as a tonic, increasing the appetite and giving tone to the digestive organs, in this respect acting different from copaiba and cubebs.

P. S. In reading through your February number of the THERAPEUTIC GAZETTE, I see you have made a mistake in the formula given in my article, on Cascara Sagrada, etc., the whole quantity should read: Glycerinæ pur. q. s. ad ℥ jv, instead of ℥ ij as it is printed.

Berberis Aquifolium.

BY W. H. ELLETT, STARKVILLE, MISS

CASE I.—Elderly unmarried lady; irritable psoriasis of many years' standing, and involving about half the surface of both legs, with isolated patches on thighs and hips. Prescribed:

℞ Fl. ext. berberis aquifolium, ℥ iij,
Iodide potassium, ʒ iv.
Simple syrup q. s. ad., ℥ viij.

M. S. Teaspoonful four times daily.

Her improvement was rapid, and in a few weeks she pronounced herself well. Subsequently she bruised an ankle, abrading the surface, and the psoriasis returned. She is now under the same treatment, but I do not yet know with what results.

Case 2.—A negro child, æt. 5. The history of the case a little obscure; had been in bad health for a month or two, with periodic attacks of intermittent fever, and presented, when I saw it, the typical appearance of chronic Bright's disease; ascites, great œdema of face and lower extremities; the eyes entirely closed, and considerable ulceration around the right ear. The urine, however, yielded only a trace of albumen to the usual tests, but threw down on cooling a thick deposit of what appeared to be amorphous lithates. I could only diagnosis a depraved condition of the lymphatic system. The intermittents yielded promptly to quinine, but without abatement of the other trouble. I prescribed the above formula in suitable doses. The improvement was rapid, complete and permanent.

Case 3.—A negro man, æt. 35; tertiary syphilis. I had prescribed for this case seven or eight years ago, at the onset of secondary stage, but, as negroes generally do, he suspended treatment at the subsidence of acute symptoms. He came now from a distance to see me and was a pitiable object. Had been unable to work for a long while; was much emaciated, and complained of a constant and an intolerable headache. I prescribed the same formula in tablespoonful doses four times a day, and did not see him again for six weeks. He then had the appearance of one who had been made anew; was fat; had the fresh-looking skin of a child, and was managing a wagon and four mules. Have not seen or heard of him since.

Sourwood (Oxydendron).

BY FLOYD CLENDENEN, M. D., LA SALLE, ILL.

I WISH to call the attention of the medical profession to a new and valuable remedy, though it has been known to a few eclectic physicians during the past twenty-five years as a remedy in dropsy. The drug is sourwood (oxydendron), a tree that grows abundantly throughout the Virginias, Kentucky and the Southern States, attaining the height of forty to fifty feet. It flowers in April and May. It may be found in the states above named growing on poor uplands and south side of hills and mountains. The young trees are very straight, and beautiful canes are often made by ringing and bruising the bark of the young tree. The stick is then subjected to heat by being pushed beneath hot embers until the sap is raised, when the bark is easily removed, leaving a beautiful indelible blue spot beneath where the bark had been bruised.

The leaves and bark of the sourwood contain the medicinal properties, being diuretic and laxative. The best way to use it is to make a semi-solid extract, which should be worked into two-grain pills, to be given in doses of two or three pills, three times daily, gradually increasing the dose each day until twelve or fifteen pills are given during the day, then gradually decrease day by day until the original dose is reached. By this mode of treatment dropsical effusions of the worst form are often removed. Not only in anasarca, but also in hydrocephalus and hydrocele has the fluid been known to be drained off by means of the sourwood. It will doubtless prove one of our best indigenous therapeutic agents when its properties are fully known.

Translations.

[Translated for the THERAPEUTIC GAZETTE from an article by Valer. Podwyssotzki, M. D., Assistant and Lecturer in the Pharmacological Institute of the University in Dorpat, Russia.]*

Lippia Mexicana, A New Remedy.

The constituents of lippia Mexicana are free from toxic properties and the parts used medicinally are the leaves and stalks. These are gathered during the flowering season or shortly after; in the latter case the unripe seeds will be found mixed with the drug. The taste of the leaves is agreeable, reminding one of the sweet flavor of lemon-balm; chewed. the drug possesses a sweetish taste, which is also perceptible in the watery distillate. The aqueous infusion is less sweet and more astringent and bitter.

In Beck's Therapeutic Almanach, for 1882, the lippia Mexicana is mentioned among other new agents as an excellent remedy for coughs, catarrhal affections and phthisis in its primary stage.

The plant is indigenous in the moist, swampy parts of Central America, where it rivals the pine-apple and the vanilla plant in their luxurious growth. The small flowers, gathered in bunches like those of the grapevine, possess an aromatic, refreshing taste, and as the children of the Indians eat them with great relish, they were tried with reference to their effect on the human system—normal and pathologically affected. It had been noticed that small quantities of the flowers produced no ill effects upon the system of children, while, when eaten to an excess, vomiting and sleepiness invariably were the consequences. This observation and the sweetish taste

*The following sources and literature have been principally drawn upon by the author: Beck's Almanach, Communications from Parke, Davis & Co., Therapeutic Gazette, Wedel, de Verbena, Luerssen, Mediz. Pharm. Botanik, Grundzüge der Botanik, Strumf, Arzneimittellehre, Dufour, sur les propriete's des Végeteaux and Langgaard, Formulario Med., and others, from Pharm. Ztg. für Russland, through D. A. Ap. Ztg

led next to the application of the plant as an expectorant, patients being ordered one or two bunches of flowers at a time, to be repeated as necessary. The leaves, possessing the same taste, also were shown to have similar effects.

Lippia Mexicana is a creeping, evergreen shrub, with very long roots and a multitude of branches. The stems are woody, quadrangular in shape; the leaves are elongated, with toothed edge and rough surface, lined with numerous minute glands. The stems generally show a tendency to seek ground, into which they send new rootlets. The plant flowers from November to March; the flowers are small, globular, and white or reddish in color. The fruits containing seeds are, in the samples sent to me, green and form small granules crowded about a short stem and enveloped in green membranes. The whole fruit reminds me of an unripe raspberry or blackberry. The roughness of the surface of the leaves may be explained by the presence of numerous small hard glands.

Lippia Mexicana belongs to the family of verbenaceæ, and to the sudivision lippia dulcis. Many plants of this family formed part of the armamentarium medicamentorum of former times, but only few of them gained reputation enough to be recognized as remedies of some importance; even the latter were soon dropped again from the official list, although they are even to-day well known as popular household remedies. It may be well to state here, that in many cases we have returned to remedies (and made good use of them) which had been previously cast aside as "good for nothing." I only remind you of the convallaria majalis and the adonis vernalis. Both of these contain substances of intense physiological effects, substances which are, however, very easily decomposed. Hence the contradictory reports as regards their value as therapeutic agents and their changeable fate as such. Adonis vernalis, especially, has been subject to much praise and much severe criticism; its active principle, a glucoside, being very easily decomposed into bodies, which, according to my own observations on frogs, are devoid of any physiological or therapeutic effects.

Among the officinal products we do not have any prepared from a member of the verbenaceæ family, although some obsolete articles, as for instance the semina agnicasti (from vitex agnuscastus) and the herba verbenæ (from verbena officinalis) have been and are used as popular family remedies. Since the lippia Mexicana has been scrupulously examined and been admitted to the list of therapeutic agents, it does not appear to be without interest to study the properties of some other members of the same family. Based upon the analysis of lippia Mexicana, the medicinal importance of many verbenaceæ may be readily explained and sustained, but especially the question can be answered, why the more odorous and aromatic species held their place as a remedy for a longer period than the other species, and why the former were from time to time re-introduced empirically into practice, while the latter remained forgotten.

The verbenaceæ may be divided into several classes, of which we mention the lippiaceæ, santanaceæ, durantaceæ, etc., etc.; 700 species in all form this family, but only few of them are of interest to the physician or pharmacist. Some of them are sound, healthy shrubs, some of them again might be termed half-shrubs, while one species forms lofty trees. The tropic regions and Central America are the true home of these plants; in more moderate climates the members of this family approach more or less the herbaceous type of vegetation. Some species are in the Caucasian mountains and in the Crimea, some throughout southern and southwestern Europe. As officinal have been and are recognized: Verbena officinalis, V. triphylla (also called lippia citriodora), V. jamaicensis, Vitex agnus castus, Lantana pseudothea, L. camara, Teka grandis, V. crinoides, V. practeosa, V. urticifolia, Lippia graveolens, L. calicarpæfolia, and the plant forming the subject of this article, Lippia Mexicana.

Verbena urticifolia is recommended by American physicians as of valuable service in gynæcology. Dr. Reidville prefers it under certain circumstances to ergot; prescribes the verb. urt. in doses of two drachms every half hour. From four to six doses are sufficient to produce the desired effect.

Verbena practeosa is common throughout the United States, and is a popular remedy for inflammation of the eyes (conjunctivitis) and for healing up boils and scrofulous sores. A short time ago, however, Jackson found the plant to be unreliable in scrofulous affections.

The tannic acid contained in the verbenaceæ justifies their use against conjunctivitis and similar affections, while in scrofulosis they can be of benefit only in case the adstringent constituents are accompanied by substances possessing properties that stimulate the urinary organs.

Verbena crinoides has been known for some time to American physicians as a valuable excitant to the menstrual functions. It appears strange, that the same physicians should use the same remedy also against profuse menstruation. Probably American physicians use the remedy in one case in the form of an alcoholic extract, in another emergency as a watery infusion. To judge from the examinations of lippia Mexicana, the aromatic constituents act as excitants, while the rest show the tonic and vaso-depressor effects common to almost all the verbenaceæ.

Teka grandis, a tall, vigorous tree furnishing timber for ship-building. The infusion of the leaves is used by the Indians against cholera. Its medicinal effects must be due to the tannic acid contained in the drug; silk and cotton are dyed dark brown by the infusion of the leaves.

Lantana amara, with highly fragrant, red or yellow flowers, is used in America for aromatic, stimulating and excitant baths. It may be remarked, that lippia Mexicana contains an excitant principle, which may be extracted by hot water or steam.

Lantana pseudothea, of agreeable odor, is used in Brazil in the place of tea. Dufour says, that the capitao de moto, a favorite beverage, is prepared from thts plant. This seems, however, to be a mistake, as other sources assert, that the beverage in question is made from the coapônia globosa. The capitao de moto is a purgative, and may, perhaps, only be aromatized by the species of verbena mentioned. No member of the verbena family is possessed of purgative powers.

Verbena Jamaicensis is indigenous in Central America and Brazil. In these countries physicians, as

well as uneducated practitioners, use it as a nervous excitant, stimulant and tonic; besides the plant is said to render valuable services when applied externally to wounds. Furthermore, it is said to possess anti-febrile and anti-rheumatic properties. Internally it is generally administered in the form of an infusion, externally as a cataplasm. This plant is also known under the name of gerbao or agnara ponda. As regards the presumed anti-pyretic properties of this plant, I shall speak of these on the occasion of describing a plant belonging to the same family, a native of Russia and used also as an anti-pyretic.

The following plants belonging to this family may claim our attention:

L. citriodoro (verbena triphylla), the leaves of which possess an agreeable, lemon-like odor, similar to that of L. Mexicana. It is used as an excitant, stomachic and anti-spasmodic, in the form of an infusion, 5 parts to 1,000.

Vitex agn. castus.—The branches and seeds of this plant are used in gonorrhœa, like cubebs. Their efficacy is in all probability due to the tannin contained in the plant and to a peculiar principle, which Lauderer considers to be an alkaloid and which he calls viticine.

L. graveolens.—This plant is used in Venezuela as an expectorant, while

L. calicarpæfolia is used in the same country as an excitant and stimulant.

But let us return to the original subject of this essay, *L. dulcis Mexicana*. This plant contains several active principles with marked and characteristic physiological properties; it must, however be said, that all the verbenas contain these principles, but the quantities and proportions vary considerably in the different species. All contain tannin, but none enough of this substance to be compared in that respect with other plants; the physiological effects are principally dependent upon the amount of tannin contained in them. In conclusion, the active principles of lippia Mexicana justify the opinion, that it deserves fully the attention paid to that remedy, and that probably in some future day it will be recognized by being admitted to our pharmacological armamentarium.

The chemical examination of the leaves and stalks furnished me with the following facts:

a. The infusion (or decoction) of lippia Mexicana is of a dark cinnamon-brown color, and possesses a sweetish, somewhat astringent taste, the sweet taste outlasting the latter; sometimes it is noticed only after the astringent taste has disappeared, and is then very intense. Choride of iron produces a greyish-green discoloration, while acetate of lead produces at once a brownish-yellow precipitate. Shaken with ether, the infusion imparts to the latter an exceedingly sweet taste, caused by a peculiar substance, accompanied by a principle, which is precipitated by basic lead acetate, forming a yellow sediment. When the latter is treated with alcohol, a yellow solution is obtained, the color of which is changed into green by the addition of chloride of iron.

b. The tincture prepared with absolute alcohol at ordinary temperature is of a greenish-yellow color, which is turned lighter yellow by acids, and restored again by alkalies to the original appearance. On addition of lead acetate a yellow precipitate is formed, which is turned light green by iron chloride, lead chloride being separated. The tincture tastes less astringent than the infusion, but decidedly sweeter. The extract obtained by evaporating the tincture tastes also very sweet. Diluted alcohol forms a brown tincture of more astringent taste, and the salts of lead form with this tincture a brownish-yellow precipitate, which is colored greenish-black by iron chloride, not light green, as in the former case.

c. The ethereal tincture or extract of the leaves is light green, the taste sweetish, somewhat bitter and camphorous. On evaporating the ether, drops of a green ethereal oil are obtained, besides some needle-shaped crystals, agglomerated in starlight bunches, and some white scales of irregular form. After washing out with distilled water the residue from the ethereal tincture, there remains a sweetish, aromatic bitter, camphor-like substance. The washings do not taste astringent, and iron chloride colors them slightly green; acetate of lead causes a precipitate which is colored green by iron chloride. The white scales mentioned are insoluble in water and only sparingly soluble in alcohol.

d. By exhaustion with chloroform, an intensely green solution is obtained, which on evaporation furnishes an extract, from which water does not take up any matter the color of which is changed by the action of iron chloride.

e. The aqueous, permanently white, distillate possesses a sweet taste, reminding one of licorice root and the flavor of the Italian fennelseed. During distillation needle-shaped crystals are deposited in the worm or in the neck of the retort. From the distillate, drops of ethereal oil are separated on standing. The oil tastes sweet and resembles otherwise the oils of lemon balm and lemons. The crystals found in the neck of the retort are volatilized at a temperature of from 25 to 30° C. Should, during the operation of distillation, the worm or the neck of the retort become too warm, the crystals evaporate, forming dense white fumes. On shaking the white distillate with ether, a solution is obtained, from which a large quantity of crystals may, on evaporation be obtained, identical with those found in the neck of the retort. The distillate is devoid of astringent properties, and iron chloride as well as lead acetate remain without action on the same.

According to the results of these experiments, there appear to be present in the drug four substances differing essentially in their nature and character from each other: (*a*) a substance of astringent taste, soluble in water, and producing a greenish-grey discoloration with iron chloride; (*b*) a substance freely soluble in alcohol and water, less soluble in ether, and almost tasteless, producing a light-green discoloration with iron chloride, which is turned yellow by alkalies, and which gives a yellow precipitate with lead acetate; (*c*) a sweet substance soluble in alcohol, ether, chloroform, less soluble in water, is volatilized together with watery vapor during distillation, and is separated from the distillate in the form of oily drops; and (*d*) a substance soluble in alcohol, ether, chloroform and in the oily substance contained in the leaves, as mentioned above, very sparingly soluble in water. It is volatilized together with the watery vapor and condensed with the same. On cooling it crystallizes out. It is volatile at a temperature of from 25 to 30° C. In presence of the ethereal oil this substance readily mixes with water, forming a white

milky liquid of an aromatic bitter taste, and resembling an ordinary emulsion.

Further experiments go to show that all these substances belong to the aromatic series, or to groups related to it. The first is a variety of tannin, the amount of which present may be found by determining it quantitatively with potassium permanganate, but which cannot so far be produced in crystalline form. Isolated, purified and dried it forms a dark-brown mass, the solutions of which are decomposed by the action of ammonia and of atmospheric oxygen.

The second substance, of an intense yellow color, belongs to the quescetine group, which comprises many species, just according to the difference in soil, temperature and other conditions of the climate. This substance is without any importance, medically speaking. By treatment with alcohol and lead, this substance could undoubtedly be obtained pure and in crystals, but the plant contains only a small portion of it and it must therefore be doubted, that it ever will pay, to separate this article from the crude drug, immense stocks of the drug being required.

The third substance is an ethereal oil containing oxygen. It is to be had pretty pure, and admixture of the fourth constituent being present sometimes, this substance might be called properly lippia oil.

The fourth substance is an easily volatilizable camphor. It boils at a temperature of from 25° to 30° C. The same was easily procurable in sufficient quantity and pure quality. It is contained in the leaves in proportionately smaller quantity, than the ethereal oil, but the quantitative determination is, however, of no importance, as in my case at least, a considerable portion of this substance had been lost during transportation. This substance is found in most of the verbenæ, in the leaves in variable portions. The proportions of carbon and hydrogen are nearly the same as in menthol (menthen, or peppermint camphor), (75, 81 Perc. C., 12, 43, H. und 10, 20 O). This substance is called lippiol. The material at my disposal was not sufficient for further investigations, as some had to be reserved for making the necessary physiological examinations.

The substance extracted by ether, insoluble in water and nearly so in alcohol is a wax-like substance, besides which the plant contains large quantities of chlorophyll.

The process of isolating the ethereal oil and the lippiol is outlined and explained by the mode of examination; it is similar to the methods followed in the manufacture of common camphor and the ethereal oils generally. For the preparation of pharmaceutical compounds the isolation of any of the active principles of the drug appears unnecessary. The more important constituent, lippiol, is contained in the plant in a form and combination rendering it soluble in the fluids of the human body and enabling it to be rather easily absorbed. Lippiol and the ethereal oil acting as carminatives, they increase the efficacy of the rest of the constituents. Pure lippiol is very volatile and for this reason its use in the pure, isolated state would be hardly practicable; it might, however, be used in alcoholic solution. A tincture made with strong alcohol of the leaves and flowers would answer the same purpose; the tannin necessarily contained in such a tincture would not interfere with the desired action of the medicine.

It is evident, that the tannic acid of the verbena's is not worth isolating and collecting, since its therapeutic value is hardly equal to that of common nutgall tannin. In lippia Mexicana the tannic acid is present in small quantities only, while other species appear to be richer in that astringent principle; some varieties had formerly been made officinal for their astringent effects alone. With the introduction of other drugs containing larger quantities of tannin those plants became useless and were discarded, so that to-day they are not recognized even by our semi-officinal materia medica.

To enable me to arrive at some definine conclusions in regard to the physiological effects of the ethereal oil of lippia Mexicana and of lippiol, I made a series of experiments on cats as well as on healthy human subjects.

a. Lippiol: 0.002 grammes of lippiol were mixed with a sufficient quantity of mucilage of gum-arabic and introduced into the stomach of a cat, by means of a probe. Half an hour afterwards the pupils appeared to be dilated to a moderate extent. The animal was restless and vomited frequently during the primary stage. After a while these symptoms ceased, the animal, and stretching out on the floor, fell asleep. The cat awoke two hours afterwards, as spry and gay as ever, no toxic effects being noticeable.

0.5 grammes of the ethereal oil were given to a robust, otherwise healthy woman, troubled with emphysema, the oil being previously dissolved in a small quantity of alcohol. In half an hour the patient experienced an agreeable sensation of warmth in the face, which latter became flushed and somewhat congested; these symptoms were followed by copious perspiration and sleepiness. I have myself taken the tincture and found invariably, that it produces the warm sensation mentioned above principally in the face, and that it readily relieves asthmatic troubles and like affections.

b. The ethereal oil of lippia Mexicana. Taken on a little lump of sugar the oil caused a sweet taste in the mouth, followed by nausea and inclination to vomit. For some time afterwards notable volumes of gases were evolved.

c. The tannin (verbenotannin). The watery infusion was evaporated to a syrupy consistence. In course of this process the sweet and aromatic taste of the infusion was lost. Of the syrupy extract I took 4.0 grammes, which caused a hard, solid stool.

d. In order to compare the effects of lippiol, as stated above, with those of common camphor, I made experiments with the latter, administering it in equal doses. From the results of these experiments I conclude that an essential difference exists between the effects of lippiol and those of common or laurel camphor, inasmuch as the former enters easily into the circulation of the blood without exerting any irritating action on the stomach and the intestines; being a very volatile substance, it is readily eliminated by the organs of respiration, on which it has a notable effect; all camphor-like bodies are generally eliminated through these organs. The different effect of ordinary camphor is explained by its insolubility in water, *i. e.*, the fact, that through water it is precipitated from its solutions. Generally speaking, the action and effect of lippiol are similar to those of ordinary camphor as regards quality, while they differ

quantitatively; the action of lippiol is less intense, milder, but more permanent.

During the last few years numerous observations have been made and recorded with reference to the therapeutic value of lippia Mexicana. American physicians—among which may be mentioned Sexton, Durant, Blasdale and Blackerby—especially have paid particular attention to this subject, and in course of the present year (1882) the drug has been repeatedly recommended in the medical literature of Europe.

The remedy is not a specific against lung diseases in general, but it is a good expectorant, doing away altogether or reducing at least the irritable condition of the mucous membrane of the organs of respiration. It has rendered excellent service in acute and chronic bronchitis and in all sorts of coughs and colds complicated by serious irritation of the respiratory organs.

The tincture of lippia Mexicana appears to be the pharmaceutical preparation best adapted to produce the full therapeutic effect of the drug. To judge from the analytical results, it contains all the desirable constituents as nearly as possiple in the proportions in which they are associated in the fresh drug. In preparing the tincture, only the strongest alcohol must be used, as this only is able to dissolve the active ingredients and the oil. And particular stress must be laid on the fact that the tincture should, in order to be efficient, be prepared from the fresh plant only, or, the drug should at least be exhausted in as fresh a state as possible. The longer the period between the gathering of the plant and the preparation of the tincture, the less pronounced and satisfactory will be the results obtained. It is therefore advisable to procure the tincture ready prepared from America. It should be prepared by exhausting one part by weight of the flowers and leaves with nine parts by weight of strong alcohol. From the facts above mentioned may be seen that the administration of lippia Mexicana in the form of powder is not advisable, as by drying and pulverizing not an inconsiderable portion of the most active principles is lost and destroyed. Besides, it appears probable, that when the drug is administered in the form of powder, the lippia will act locally, causing nausea and vomiting. In America at least these sequels of the administration of L. Mexic. in form of powder have been observed and reported, especially when the dose had been somewhat larger than usual. In the form of infusion the drug is of no value, as the lippiol is, during the process of preparation, lost entirely.

In America the tincture is given in the dose of half a drachm to one drachm, repeated every three or four hours according to the requirements of the case. Children under 12 years of age are given smaller doses in combination with some agreeable syrup or elixir. In case the stomach is out of order, the tincture may be mixed with equal parts of glycerine; of this mixture a teaspoonful may be given every four hours. The glycerine may in some cases be objectionable, and I prefer then to give the tincture in the form of a mucilaginous emulsion or simply mixed with water. The highest dose per day given in any case brought to my knowledge, was one teaspoonful given in intervals of one-half hour during almost a full day, with good results.

[Note by the translator:—As in all probability lippia Mexicana will be more extensively used in the future in Europe, it would be advisable to prepare the tincture there from a fluid extract in the proportion stated by the author, 1—9, each ounce by weight of the extract corresponding to an ounce by weight of the drug. The only difficulty would be to have the drug always equally dry. We would suggest to make the fluid extract always of a standard specific gravity, which, using the drug always in as nearly as possible the same condition, would go far in preventing variations in appearance, strength and medicinal effects of the extract and tincture.

EDITORIAL NOTE.—The author has not been sufficiently specific in regard to the strength of the tincture of lippia Mexicana employed in this country, and the translator has thus been led astray. This tincture (P., D. & Co.'s) is concentrated to half the strength which is the standard of the fluid extract, and thus requires the addition of but four and one-half parts of alcohol instead of nine parts to bring it to the strength of the tincture contemplated by the author.]

[Translated from "Pharmaceutischen Centralhalle", 1882, Nos. 28, 31 and 33.]

American Drugs—By J. Moeller.*

The Americans are eagerly investigating their indigenous flora for substitutes for the drugs of the old world. Their endeavor toward an independent materia medica is, without question, perfectly proper, and should they occasionally in this endeavor overshoot their mark (a something which the American nature is prone to do), it should not be forgotten that our knowledge of the remedial properties of our drugs was not achieved at one stroke, but that we are indebted for it to the experience of a thousand years.

It is very unjust, in my opinion, to regard with suspicion, as is generally done, everything bearing American endorsement; a previous thorough investigation would seem to be a matter of justice. If several of the American drugs which have of late years been heralded as specifics, have not fulfilled the promises made for them, a remembrance on the other hand of our experience with several preparations of European origin and endorsement, will move us to forbearance. In this manner the sanguine expectations aroused by extravagant claims have a good effect; the whole world is stimulated, and even impelled, by them to give the drug a trial, and in a short time judgment is passed on it. In a few weeks the excitement is past, and not unfrequently we have as a result an acquisition to our medical treasures, as, for instance, in the case of cundurango and salicylic acid. Such discoveries are, it is true, not made every year, but, it seems to me, that the least important and even the most insignificant are worthy of cognizance.

The well-known house of Parke, Davis & Co., of Detroit, Michigan, U. S., have most obligingly furnished me, for experiment, samples of the crude drugs from which their widely-known pharmaceutical preparations are made. These samples form the basis of the following descriptions:

1. CORTEX RHAMNI PURSHIANI (CASCARA SAGRADA).

Convex or quill shaped pieces of bark, three finger-breadths or more in width, and something over 2

*Dr. J. Moeller, Botanist and Microscopist of (Forst Anstalt) Imperial Forest Institute, Mariabrum, near Vienna, Austria.

mm. in thickness, violet brown and smooth on the exterior surface, and Morocco yellow and finely wrinkled on the inner surface. In the older, superficially grooved specimens the thin corky, brownish layer peels off in places from the ochre-yellow net-like base; in the younger, occasionally quill-shaped bark, the superior surface is broken up into irregular divisions—a finger breadth apart, pointed at both ends and about 1 mm. in width at the middle.

The bark breaks with a short fracture; the external broken surface is smooth; on the internal the greater part is thickly studded with very delicate brush-like fibres of at most 1 mm. in length. To the unaided eye the diagonal incision appears nearly homogeneous. Under the lens one sees dispersed on the outer part bright spots, in the bast radiant streaks, with irregularly disposed diagonal lines between them.

Microscopical Structure.—The cork membrane numbers in a thickness of 0.045 mm. from 8 to 12 series of regular smooth somewhat thick-walled but never sclerotic cells, and borders directly on the tangentially disposed primary bark, which here and there maintains a collenchymatic character. There is no cork. In the parenchyma of the bark are found, scattered irregularly, groups of spherical stone cells (up to 0.4 mm. in diameter) whose elements are not increased, which are thickly disposed and which are accompanied by individual rhomboidal crystals while in the thin walled parenchyma crystalline glands predominate. The inner bark (Fig. 1) is

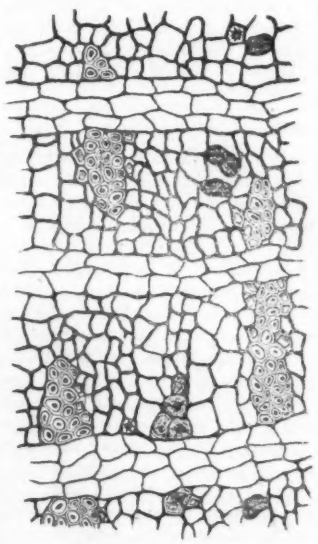

FIG. 1. Transverse section through the bast layer.

usually separated into two or three divisions of very uniform breadth by the medullary rays. These consist chiefly of soft bast in which the ethmoidal tubes are distinguishable on cross section from the narrower and rounded parenchyma cells by their wider and irregular lumen. The ethmoidal tubes are connected by several (4–6) wide sieve-plates of quite porous structure and covered with a thick callus in the young bast layers; on the radial lateral surfaces they have rounded sieve fields. The parenchyma cells are coarsely spotted on the radial and horizontal surfaces, and in a tangential direction they are loosely united and partially separated. The bast fibres form small plates usually of two or three rows which extend over only a few bast rays and are disposed alternately among the neighboring plates. They are surrounded on all sides by chamber fibres with separate crystals, while the bast parenchyma has but a few glands.

Groups of stone cells similar to those found in the middle bark are rarely found in the bast. The radiations of the marrow are very slight and consist of thin walls between the bast fibres. They contain no crystals but have instead a friable, lemon-yellow substance (Rhamnoxanthin ?) which dissolves in water with a yellow, but which when dissolved in cold potassa lye assumes a dirty red color. Starch is absent from all parts of the bark.

Cascara sagrada differs very clearly from the "cortex frangulæ" which is officinal in the German, Norwegian, Swedish, Danish and Russian pharmacopœias, in the thickness and fragility of the bark, the frangula bark being at most 1 mm. in thickness and of a tough fibrous nature. An exellent distinctive feature of the American variety are the groups of stone cells found in the middle bark and sparingly in the bast. These were also found to be absent in other varieties of the Rhamnus examined by me (see J. Moeller, Anatomie der Baumrinden, Berlin, 1882). It is also noteworthy that there is a hardening of the radiations of the marrow between the groups of bast fibre, as in the case of the rhamnus tinctorius, thus differing from most of the other rhamnaceæ.

The source of the cascara sagrada (sacred bark) is the rhamnus Purshiana DC. (Rh. alnifolius, Pursh, Frangula Purshiana, Cooper), a shrub or tree 7 m. in height, and is found on the Pacific slope of the United States. Its branches are covered with a downy substance, the leaves are elliptical in shape, 5 to 8 cm. in length and 3 to 8 cm. in width, having a leaf stalk of 2 cm. in length, blunt at the base, pointed and dentated at the margins. When young the leaves are thickly covered with hair, but later become smooth, similar to the leaves of the Frangula Caroliniana, Gray, indigenous to the southern states. The flowers are disposed in thick corymbs, are small white, and develop into black three fruit which contains three shining seeds.

Cascara sagrada seems to be identical with Chittem or Shittem bark, under which name Ed. A. Mayer learned as early as 1850 that the bark was used by the Indians and trappers of California as a cathartic. More recently it has been very extensively employed in America, where it is regarded very highly as a remedy in constipation and dyspepsia. Dr. J. R. Boyd, for instance, regards it as being as nearly specific in its action as quinine (!) and finds in addition that as a remedy in chronic constipation small doses are more beneficial than large doses.

Two preparations manufactured from the bark are almost exclusively employed: an alcoholic extract and an elixir, made with dilute alcohol and glycerin, and the oils of orange and cinnamon, etc. A formula for the preparation of these was submitted by George W. Kennedy to the American Pharmaceutical Association (reprinted in the Druggists' Circular and Chemical Gazette, August 1881, and in the Pharmaceutical Journal and Transactions, September, 1881). Complaints are already made of the existence of false varieties in the market. In the

March, 1882, number of the THERAPEUTIC GAZETTE it is stated that owing to the ignorance of the drug-gatherers a large quantity of worthless and inert bark of other varieties has been placed on the market.

The Different Methods of Coloring Tubercle Bacilli.

The first method, that described by Koch, was as follows: Dry a small piece of sputum on a glass-square, place it in a weak alkaline methylen blue solution for twenty-four hours, and then wash over the sputum with vesuvine. This method was soon replaced by that recommended by Ehrlich, which consisted in: After having dried the sputum on the glass-square, it was colored in methyl violet and aniline water. Anilline water is made by adding three parts of aniline oil to 100 parts distilled water, shaking well, and filtering. The methyl blue solution is concentrated, alcoholic, and so much of it is added to the aniline water in a watch-glass that opalescence appears. The preparation remains ¼ to ½ hour in this solution, after which it is placed in nitric acid (1), water (2), and then impregnated with Bismarck brown. In the place of methyl violet, Professor Fränkel uses fuchsin, afterwards coloring with methylen blue, and prefers this coloring to any yet devised, as preparations thus colored retain their color longer, and admit of better demonstration by artificial light. Baumgarten's method consists in treating sputum dried on a cover-glass with caustic potash (33 per cent. sol. to watch-glass of water), and is considered highly unsatisfactory, as the bacilli are not all colored, therefore difficult to find. This last method is not to be recommended.—*Berlin Klin. Wochenschrift*, No. 45, 1882.

Kairine and Kairoline.

Kairine is an oxyhydro-methylchinoline, a beautifully white crystalline body, soluble in water. Kairoline is a similar derivative of chinoline, hydro-methylchinoline. Kairine is the product that has proven itself the more useful, and consequently, the following conclusions derived from experiments on animals and the human subject were gained from kairine alone. The dose of kairin lies between one-fourth and one-sixteenth of a gramme. The proper way to administer it is to measure the temperature every half hour and give the dose accordingly. The effect is similar but greater than that produced by quinine, and there are no unpleasant local or general, symptoms attending its use.

Unless kairin be given in covered capsules it sometimes happens that the powder gains access to the nose, thereby provoking an itching sensation to that organ. This antipyretic answers much more satisfactorily in phthisis, and in any trouble where medicine must be given for a long period.

The effect of this remedy lasts for a comparatively short time, so that two to three hours after the last dose the temperature begins to mount up again. The product that will soon be offered, is the hydrochlorate, but being identical in action with kairine, this last name alone will express the substance.—Dr. Wilhelm Filchne, *Berlin Klin. Wochenschrift*, No. 6, 1883.

Epidemic Diseases.

The following table shows the deaths from epidemic diseases in many large cities of the world from October 15 to November 10: Died of small-pox in Vienna, 9, Prague 7, Paris 26, London 10, Dresden 3, Petersburg 48, Madrid 96, Brussels 4, Moscow 50; measles: Berlin 9, Stettin 5, Stuttgart 3, Amsterdam 2, Paris 34, London 20, Liverpool 36, Manchester 14, Stockholm 3, Petersburg 3, Venice 6, Bukarest 6, Madrid 12, Glasgow 8; scarlet fever: Berlin 69, Danzig 2, Breslau 4, Munich 2, Dresden 13, Leipzig 5, Hamburg 10, Hanover 6, Cologne 4, Vienna 19, Pest 22, Pragen 22, Basle 2, Paris 2, London 290, Glasgow 24, Liverpool 32, Birmingham 32, Edinburgh 14, Petersburg 75, Stockholm 9, Copenhagen 8, Odessa 15, Rome 3, Madrid 7; diphtheria and croup: Berlin 160, Königsberg 45, Danzig 11, Breslau 32, Munich 35, Nuremberg 6, Dresden 34, Leipzig 11, Hamburg 22, Hanover 10, Cologne 3, Strasburg 5, Vienna 32, Pest 24, Prague 12, Amsterdam 24, Paris 132, London 135, Glasgow 33, Liverpool 14, Copenhagen 10, Stockholm 9, Edinburgh 14, Moscow 77, Petersburg 157, Odessa 20, Rome 2, Venice 3, Madrid 41; typhoid fever: Berlin 45, Danzig 2, Stettin 5, Breslau 6, Munich 6, Stuttgart 3, Nuremberg 2, Dresden 5, Leipzig 2, Hamburg 10, Bremen 2, Cologne 2, Frankfort-on-Main 4, Vienna 8, Pest 1, Prague 8, Amsterdam 4, Paris 654, London 127, Glasgow 21, Liverpool 63, Birmingham 11, Petersburg 59, Moscow 41, Odessa 24, Rome 3, Venice 13, Madrid 14; puerperal fever: Berlin 23, Königsberg 1, Breslau 1, Nuremberg 3, Dresden 3, Hamburg 9, Hanover 2, Cologne 2, Vienna 3, Pest 4, Prague 4, Paris 11, London 21, Petersburg 7, Moscow 8, Odessa 7, Rome 1, Venice 1, Madrid 14.—*Berlin Klin. Wochenschrift*, No. 5, 1883.

Snake Poison.

Aron experimented with the poison of Naja tripudians and found that three milligrammes of the dried poison dissolved in water and injected in rabbits produced in a short while a paralysis of the respiratory centre. A decomposed solution did not seem to have lost any of its strength. As antidotes were tried hypodermatic injections of alcohol, atropine and caffeine, but in no instance did any of these substances show the slightest antagonistic effect to the poison. By means, however, of hypermanganate of potassium, according to the method of Lacerda, the author succeeded in saving six rabbits out of 13. Still better results followed the use of chloride of lime. Employed in the same concentration and manner as the potassium salt, the author saved 17 animals out of 17 experimented with. These last rabbits did not show the slightest symptoms of poisoning, but would eat quietly, while those near them not treated with lime lay in convulsions and stupefied.

The author recommends the following process for the bite of a snake: Immediately bind a ligature around the part bitten, extract the poison as far as possible by sucking or by cupping, and inject around the wound a two-per-cent. solution of subchloride of lime. Internally give excitants.—Th. Aron, *Cbl. f. Klin. Med.*, No. 31, 1882.

The Etiology of Pernicious Anemia.

In the blood of pregnant women suffering with anemia are to be found two sorts of living organisms,

the one one-tenth the diameter of a blood corpuscle, and having a sharp point; the other somewhat larger, consisting of two cells and less movable. The first mentioned round and small bodies show a lively, wriggling movement, resembling much spermatozoa. In one instance these bodies were found in the blood of mother and child during life in great quantities. The blood corpuscles in both mother and child were normal in size. The liver seems to form the depot for the colonization and rearing of these organisms, and from this organ they find their way into the blood. In this way is the constant occurrence of icterus to be explained. These organisms are derived from parasites originating in the teeth, and probably from a leptothrix form, with long and short rods and micrococci. All of these patients from whom blood was taken for examination were suffering with caries of the teeth in a marked degree, and some of them exhibited likewise great fœtor ex ore. Dental caries is a common trouble with pregnant females, sometimes causing them to lose many teeth in one pregnancy, and with them this probably explains the cause of pernicious anemia.—Prof. Frankenhaeuser, *Centralblat für d. Med. Wissenschaften*, No. 4, 1883.

Retention of the Head of a Child in Utero Forty Days.

In the following case the head, after version on one foot was made, was torn from the body by force. The mother remained eight days without assistance, after which time luke-warm injections were made into the vagina in order to remove the disagreeable odor. This procedure was kept up for forty days, when the patient was first seen by the author. He found the cervix had returned to its normal size, so that dilatation was necessary, after which the macerated bones were removed singly by means of a polypus forceps. In spite of this unwonted negligence, symptoms of septicæmia never appeared, nor did the uterus show any desire to rid itself of this foreign mass.—A. Valenta, *Arch. f. Gyn.*, xix, p. 431.

Nerve Stretching in Tabes.

In two cases, yielding to the repeated wish of the patients, Leyden performed the operation of stretching the nerves. After carefully weighing all the facts, he comes to the conclusion that the seeming improvement following the operation was not of any value. The improvement in sensation was illusory. In a third case, diagnosed as multiple neuritis, in which all four extremities were paralyzed, through Leyden's advice Bardeleben stretched both plexus brachioles. In consequence of the operation movements of the extremities became better, otherwise there was no improvement.—E. Leyden, *Charité Annalen*, vii, 1882.

Koch's Bacilli in Urine.

Lichtheim has demonstrated that tubercular bacilli occur frequently in the kidneys, but such observations up to this time have not been published in regard to the urine. Bacilli identical with those found in the lungs of phthisical subjects are readily found in the urine according to Ehrlich's method. It is advisable to add thymol to the urine to be examined in order to eliminate other bacteria, as of decomposition, color the preparations twenty-four hours, and after using nitric acid, recolor in methylen blue, as it is preferable to fuchsin.—Prof. F. Rosenstein, *Centralblatt*, No. 5, 1883.

The Treatment of Rabies with Injections of Pilocarpin.

Dr. Dartiques reported two cases of rabies treated by him with subcutaneous injections of muriate of pilocarpin, and that both recovered. In the discussion of these cases in the Academy at Paris, M. Sée and Dujardin-Beaumetz referred to 23 cases treated by them, and of this number six were treated according to the method of Dartiques, but in no single instance was there a recovery.—Bouley, *Bull. de l'Acad. de Med.*, No. 25, 1882.

Oleandrine and Apocynine.

Schmiedeberg has succeeded in isolating from the leaves of oleander, oleandrine and neriine. Oleandrine possesses all of the characteristic effects of the digitalin group.

Further, he has produced from the root of apocynine cannabinum two substances analogous to oleandrine and neriine. Chemically these bodies have this in common, they are free of nitrogen and are not acids.

These substances are identical in action with the digitalin group.—O. Schmiedeberg, *Arch. f. Exp. Pathol.*, xvi, p. 149.

Hot Water Irrigations.

Frerich communicates the following cases in A. Martin's Clinique in which hot water irrigations (40° C.) were made: Parametritis 21 cases, perimetritis 18 cases, perioophoritis and oophoritis 18 cases. The first group shows cures amounting to 80 per cent., the second 50 per cent. The author calls especial attention to the fact that, by means of these irrigations pain and hemorrhage are beneficially influenced.—C. Frerich, *Dissertation, Berlin*, 1882.

Correspondence.

OFFICE OF THE NUMSKULLINE MANUFACTURING CO.,
NEW STINKOMALEE, N. Y., March 1, 1883.

For the last few months you have been carrying on a relentless war against the "nostrumers," by which I mean the proprietors of trade-marked, copyrighted and patented medicines—the medical monopolists, who, through congressional favoritism, are, at the expense of the sick, about to oust physicians of their practice and to substitute that of their own and a lot of "toothless grannies" instead. Still, from

present appearances, your war seems by no means one of extermination.

This is, doubtless, right in you, for scarcely any of the proprietary nostrums profess to cure more than a hundred diseases each, and plastic doctors have not, as a general thing, certified that they would. There is an exception, if I mistake not, as to bromo-chloraline and iodo-bromide of calcium comp., which aggregate in their joint pretensions the cure of from seven hundred to a thousand.

It looks a little hard to rub these nostrum vendors so severely when they set forth the wondrous virtues of their wares so eloquently, and advertise them in so many ways, accompanying each package with such plain directions for use, thus endeavoring to relieve the "busy practitioner"—the "over-worked doctor"—of all labor, if possible.

Perhaps you are by these "proprietaries" as an old medical friend of mine was by the members of congress who voted to put sulph. quinine on the free list, while the bark and chemicals for its manufacture were taxed exorbitantly. He said: "Every person who is sick, or who expects to be sick, or to have any sick kin, ought to shed tears of gratitude on the graves (but not elsewhere) of every member of congress who was dishonest enough or ass enough to vote for this law."

As before stated, it may seem well to you to "rake" these "one-horse" patentees, but you can certainly not find fault with me, seeing that I have "licked the Blarney stone," and have got up a "universal panacea," both for "man and beast," which I have "trade-marked," "copy righted" and "patented" to keep, and for no other reasons, dear doctor, than just to keep unprincipled individuals from imitating the same. I call my preparation Numskulline. The name, I admit, is a little "off," as the termination *ine* signifies the active principle. For example, Listerine signifies that the preparation is the active principle of Dr. Lister. My preparation is as appropriately named as "Ingluvine," "Gizzardine," "Hydroleine" or "Chondroleine."

My preparation, "Numskulline," has reference to the people that will use, and the doctors that will certify (legion), rather than to any occult scientific "abstrucity." It is designed for both internal and external use, and there is no disease or wound of either man or beast that it will not immediately cure, acting with "facility, celerity and certainty." I am certain, Dr. Brodie, if you ever prescribe it, that you will devote most of your paper, your time and your talents to the advancement, uses and sales of this universal panacea, and, although the medicine will recommend itself, and although I would not have a man to "puff" it, still, if you do, unsolicited, give your influence to it, I will treat you as many other doctors have been treated who "puff" medicines less meritorious. I will "hit you in the hand."

Now, in the invention and perfecting of Numskulline, I have brought to bear a vast amount of knowledge, patent and occult, with a perfect acquaintance with all the science and arts, including especially the art of "money-getting." Besides, I am familiar with astrology and all the ghosts of all the astrologers and soothsayers of antiquity. In addition, my laboratory is in constant telegraphic and phonograhic communication with "Spookdom," and the spooks of Andromachus and Paracelsus have had much to do in the production of the greatest of all scientific productions—Numskulline. Besides all this, I use the active principle of all patent, trade-mark and copyright medicines, but I do not not prepare them from the crude material, as such medicines are said to be prepared. I will illustrate: Take firwein. Instead of getting up coniferæ, etc., I first purchase the firwein already made. Instead of running round to hunt up chickens for the lining of these gizzards, I buy gizzardine or ingluvine at once, and so of all other constituents of Numskulline. I purchase my medicines (as named in the formula) from the "nostrumers" or their agents, and pay their prices, so they have no right to complain. I superintend the business, but as special superintendent of the laboratory, especially in my absence, Alako, God of the Gypsies, does this duty. He is always on hand.

Now, there is no disease—absolutely none—that Numskulline will not cure, it is made up of so many "cure-alls," patented, copyrighted or trademarked "whimbugs"—no wonder. It is put up in the form of a cordial, in pint bottles, pleasing to the eye, euphonious to ear, delightful to the olfactories, gustatory to the taste, and elysian to the feelings and stomach. Price, only one dollar per bottle.

A pamphlet with two millions of different diseases that Numskulline cures without fail, nine thousand certificates and commendatory notices with plain directions, so that a five-year-old child, though with only half sense, can prescribe and administer the medicine without troubling any doctor except for his emendatory statements will be sent on application.

Many parties going over the country pretending to cure disease by prayer and charm, secretly use Numskulline, but one evangelical charlatan who thought to cheat not only Satan, but me, used olive oil on a rheumatic patient. Result, patient got well of rheumatism that day and died of gout the next. I shall distribute millions of pamphlets and almanacs every year, telling what the medicine is good for and how to give it, which will be in every store and grog shop in the land, telling, likewise, where to procure this incomparable compound, and each pamphlet and almanac shall have, in large letters, on the outside of both covers the friendly invitation, "take one."

That no regular physician may feel that he is prescribing a "secret remedy" to disgrace him in the eyes of his professional brethren, I give below the formula for Numskulline, well knowing that when he once gets his "foot in it," he will stick to the statement that the "horse is sixteen feet high."

As stated above, I do not use the crude material of which most of the "skunkadoodles," that are copyright, patent-right and trade-marked medicines, pretend to be made. I get the "skunkadoodle" medicines themselves, and with the aid of King Alako and other spooks, prepare it in immense quantities. Even congress favored me more than a half-million a year, by knocking the tax off nostrums, while they hold it on the toiling industries. I hear that most of the members of the lower house, and a majority of the senate actually wear amulets against witches.

The formula is as follows:

Bromo-chloralumine.
Firweinine.
Diphtherineine.
Convexuline.

Maltopeptineine.
Peptonoidine.
Listerineine.
Iodiaine.
Bromidiaine.
Celerinaine.
Milk foodine.
Acid phosphateine.
McArthur, syr. hypophosphite comp. ine.
Pancreopepsininеine.
Beefpeptonoidsine.
Caulocoreaine.
Hydrolineine.
Chondroleineine.
Iron tonicine.
Ingluvinine.
Indian blood syrupine.
Mountain herb pilline.
Jayne's expectorine.
British oiline.

Besides a thousand other "ines" and "orines" too tedious to mention.

In addition, I use, under the influence of the stars and "spooks" elixir Andromachus, (72 ingredients) and the amritu or elixir of life of the ancient Brahmins.

Each bottle (pint) contains, also, three drops of tears from the ghost of mercy, nine drops of sweat from the spook of life, and 1-60 gramme of fat from the shin (the only place the bird carried fat) of Job's turkey, the last received, as per requisition, by spook-telegraph from the "great gone before."

Below I give you a few of the many thousand medical testimonials already received, which I hope you will publish with this, my "open letter."

TESTIMONIALS.

Dr. Omphalus Strepitus, Stinkomalee, N. Y.

DEAR DOCTOR: Five years ago, I had an old man for a patient, whose only family was a son, then on his eastern travels around the world. The old man was very rich, and, as you had not then brought forward your Numskulline, he died, and was buried in a damp place where he soon rotted, all but the bones. Three years after Zorsbuble, the son, returned, and would have him exhumed. The skeleton smelt awful, but Listerine and bromochloralum were used, and much to the satisfaction of all concerned, they stunk so loud, the bony frame could not be smelt. The doctors were about to administer parvules and convexules, but these rolled out between fleshless ribs. Dr. Jonathan wrapped a blanket around the skeleton which kept them in. With maltine, iodia and caulocurea, he sat up, but no flesh grew upon his bones. "Iron tonic" got him a stomach, but no bowels to suit. "Hydroleine" and "chondroleine" had failed likewise, when, happily, I received the specimen bottle of Numskulline you sent me. I used it according to printed directions, and in five minutes he was alive and well as a man of 25 years, and to the intense disgust of his son married a girl of 18, who now has twin boys.

Your friend,

BUCK VARUMIN, M. D., Ph. D., F. R. C. S.

Prof. The. and Prac. Med. Possum Hollow Med. College.

Dear Doctor Strepitus:

I had a patient shot in hip. The ball was lodged, we thought, in acetabulum. Five of us surgeons tried all day to extract ball, but failed. I rubbed patient with Numskulline at bedtime. Next morning patient well as ever and ball lying beside his head on pillow, both fast asleep.

DEADRICH FLAPDOODLE, A. M., M. D., D. C. L.

Prof. Surgery and Clin. Surgery Possum Hollow Medical College.

I have chemically analyzed Dr. Strepitus' Numskulline and find it without any deleterious ingredient. It may be given *ad libitum* without fear. It is absolutely a panacea for all diseases.

OGDEN DOREMUS SNOOTUS, A. M., M. D., LL. D.

Prof. Chemistry and Toxicology, Possum Hollow Medical College.

Dr. Strepitus:

Numskulline is the only medicine that an educated doctor should give in any case. It cures everything.

JOHANN ROUSTABOUT, A. M., M. D., F. R. S.

Prof. Materia Medica and Therapeutics, Buzzard Roost School of Medicine.

I use nothing but Numskulline in obstetrics and gynæcology. It cures everything.

GABRIEL STRUNNK, M. D., D. D. S., K. G. C.

Prof. Obstetrics and Gynæcology, Buzzard Roost School of Medicine.

Numskulline is the wonder, and when known will be the admiration of the nineteenth century. I could not practice medicine without it.

JOHN ANDREW JACKSON PUFFEY, A. M., M. D., Ph. G., F. R. I. A.

Prof. Institutes of Medicine, Squint Town Acad. of Med.

Dear Doctor:

Your Numskulline is the greatest boon that physically suffering humanity has ever received. It cures everything. You ought to copyright, trade-mark and patent it, and surely no one has a right to complain. Surely the THERAPEUTIC GAZETTE even can't go back on you.

B. SQUIRTLANIER, A. M., M. D., D. C. L., F. R. C. P.

Prof. Medicine and Psycholog. Med., Possumtrot Col. Phys. and Surgeons.

Now, Dr. Brodie, I am all right, and you surely cannot find it in your "heart of hearts" to "go back on me."

Please do not make me (or attempt to) the Azazel or scape-goat, of all those short-comists, those trademarkists, copyright-labelists and patentees, the nostrumers, who can't cure more than a thousand diseases with one "proprietary medicine," when I can cure everything with mine.

If you will do me right I will tell you under what astral-influence I buy the "protected" medicines in the formula of Numskulline, and furnish you a delectable article that will be "interesting reading."

Very truly yours,

OMPHALUS STREPITUS, A. M., M. D., LL. D., D. C. L., F. R. S., F. R. C. S., F. R. C. P., K. G., K. O. B., K. G. F., and inventor of "Numskulline."

Warburg's Tincture, Quebracho.

It is now a good while since I purposed writing the results of my observations on the use of Warburg's tincture. I have used it in about twenty cases of malarial fever with scarcely a failure. I may indeed say without a single failure, if the cases be carefully considered. I am at present using it in the chills of phthisis, with, so far, promising results, the compound going, as it does, in effectiveness far beyond anything I have as yet tried.

I have also used in a few cases of dyspnœa from various causes, fluid extract quebracho (P., D. & Co.) with results that at first almost startled and then delighted me. It was in a case of phthisis in which I used it first. In the severe dyspnœa occurring with the evening fever the administration of a single moderate dose gave prompt relief every time, though leaving the fever untouched. I have used it also in two cases of pneumonia with the most satisfactory results.

J. H. DUNCAN, M. B.

THAMESVILLE, Ontario.

The Therapeutic Gazette

WILLIAM BRODIE, M. D., Editor.

ASSOCIATE EDITORS:

J. J. MULHERON, M. D. and A. B. LYONS, M. D.

DETROIT, MICH., April 15, 1883.

GEO. S. DAVIS, Medical Publisher, Box 470.

SUBSCRIPTION PRICE (Postage Included) $1.00.

PRICE OF BACK NUMBERS:

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Price to Foreign Subscribers (postage included) $1.25 (5 shillings.) English postage stamps received on remittances.

Another Fraud Exposed.

"A Retired Missionary, Returned from South America, whose Sands of Life have nearly run out," etc., etc.

Our readers have, doubtless, been struck with the prominence and persistence of the appearance of this philanthropic announcement by one Rev. Joseph T. Inman, Station D., New York city, in the columns of the secular press during the past few years. While professional readers have been convinced that it was nothing more nor less than bait for gudgeon, few have taken sufficient interest in the matter to inquire into the modus operandi of the swindle. Our attention has been particularly directed to it by the numerous inquiries received from druggists and others for information touching the nature of the drugs, the sale of which is the apparent object of the "retired missionary's" philanthropy. These inquiries have been sufficiently frequent to cause us to make the matter a subject of investigation in the interest of the public, whom we aim to reach through their proper advisers in such matters, the medical profession.

The drugs entering into the formula which is furnished, gratis, on application by the reverend philanthropist are the following:

"Extract Corrassa Apimis,
Extract Selarmo Umbelifera,
Powdered Alkermes Latifolia.
Extract Carsadoc Herbalis."

Having submitted this formula to the botanist on our staff we received from him the following report:

"The names with regard to which you ask for an opinion are very familiar ones to prescription clerks throughout this country, but I need hardly say that they are unknown to botanists. It is hardly more necessary to say that they are not such as could for a moment deceive a botanist, or even an indifferent linguist. Evidently they serve their purpose if they impose upon callow innocence or vulgar ignorance. The selection of names so uncouth in form and so utterly meaningless as the most of these—considered as botanical terms—may have been a brilliant stroke of genius, but it looks very much like the brazen assurance which in the lower rank of quacks goes hand in hand with stupendous ignorance. Clearly the inventor of these impossible names either means deliberately to insult the intelligence of his victims, or else he is himself blissfully ignorant of the fact that there is in botanical nomenclature a certain definite method. The slightest acquaintance with the subject would have taught him that the generic names of plants are generally either descriptive or commemorative, or else they are the classical names of representative plants of the genus. Some few are derived from common vernacular names, but these are always latinized in form; thus from the Arabic sesban we have sesbania, from the Indian quamash we have camassa, etc. A very few words of irregular form, having, however, a classical origin, have been retained, such as thlaspi and nostoc, but the list of these is a short one, and additions to it at the present day are, of course, out of the question. It is needless to say that none of the names under discussion belong to this list. One at least among them involves a palpable absurdity. Alkermes is a word familiar in pharmacy as one of the obsolete synonyms of cochineal. No botanist would think of appropriating a name already applied to an insect to designate a plant. That this is meant for the name of a plant is evident from the specific appellation latifolia—broad leaved—which accompanies it—unless, in this instance, the second half of the name is a mere blind, and the article designated is actually cochineal. The specific name "herbalis" as applied to a plant is another obvious absurdity. But it is useless to waste time in minute criticism.

Apart from their unscientific character these names display a painful poverty of inventive ingenuity on the part of their originator. A name even without meaning or etymological association may by its very sound impose upon the imagination, suggesting something as to its origin or history or its transcendent therapeutic value. But the inventor of these barbarous pseudonyms doubtless knew that such ingenuity would be wasted on the class of people he wished to impose upon. He should have remembered, however, that inquiries would be made for the articles he pretended to name, at every drug store in the country, and that some few intelligent apothecaries would have penetration enough to see that these names covered some fraudulent purpose, against which they would have the humanity to warn the intended victim. It is true that many would refuse to heed the warning, but the man would have showed greater astuteness had he avoided thus giving himself away gratuitously.

Very truly yours,
A. B. LYONS, M. D."

DETROIT, MICH.

In order to thoroughly lay bare the true inwardness of the Rev. Joseph T. Inman's scheme, we reproduce herewith such correspondence and facts as are the outcome of our investigation. As a starting point we have the following modest little card:

A CARD.—To all who are suffering from the errors and indiscretions of youth, nervous weakness, early decay, loss of manhood, etc., I will send a recipe that will cure you *free of charge*. This great remedy was discovered by a missionary in South America. Send a self-addressed envelope to the REV. JOSEPH T. INMAN, Station D., New York City.

As throwing some definite light on the nature of this scheme for the gratuitous relief of indiscrete youth, and premature senility, we give the following received in January last from a correspondent in California:

MR. EDITOR: Your exposé of the "Howard Association" induces me to give you a clue to another imposture of similar complexion and purpose.

The *soi-disant* "Rev. J. T. Inman, Station D., N. Y.," whose card has appeared in nearly every newspaper in the world, I presume, must be doing a land-office business. The afflicted, minus manhood, etc.,

are urged to apply by letter, two stamps inclosed, to this philanthropic "Rev." and are supplied with a formula, which no honest druggist can compound. Upon referring to the "Rev." the dupe finds it necessary to send $3.00 for which he obtains a small wooden box containing about two ounces of powdered lupuline.

For a long time the address was "Station D., Bible House, N. Y.;" but the Bible Society, annoyed by the frequent letter-writers, who wished to know if the Rev. (?) gentleman was connected with the society, and was all right, at first simply denied the soft impeachment, by stating that no such person had an office in their building. This, however, did not put a stop to the letters of inquiry, and, as a matter of self-protection, an investigation was made. "The Rev. Joseph T. Inman," whose habitat was in a side street, blocks distant from the Bible House, proved to be two young English bloods, who affected diamonds, fast horses, and faster women and fattened upon the credulity of those addicted to secret vices.

C.

In response to the above we wrote our correspondent that we should be pleased to publish communications of similar nature by way of exposing the many medical frauds perpetrated on the public, but that we declined to take action unless we could receive such proper evidence in full detail with reference to the matter, as would make our action well based. In reply the following was received:

———— Cal., February 20, 1883.

Mr. Editor:

DEAR SIR: I certainly did not desire nor intend to involve your journal in trouble, and regretted that I did not have the data upon which my report was founded. By chance, however, I am able to enclose a clipping, which will give you a clue to further investigation, if you need such. My impression is that I read an exposé of the "Inman" concern in the American Bible Society monthly publication.

Use your own discretion in publishing anything upon the subject. Very truly yours,

C.

The clipping referred to is the following:

PHILADELPHIA, Pa., January 24, 1883.

H. Frysinger, Editor and Publisher Democrat, Delaware Co., State of Pennsylvania:

SIR: The two editorials, in your "Family Newspaper," December 14th and 28th respectively, criticising my "Lexiconic Orthography" contests are destitute of either justice or courtesy. My private business is perfectly satisfactory to me and my customers, and does not concern you in the least.

Now about yourself.

You were a party to deceiving the public by inserting in your "Family Newspaper" the myth "Rev. Jos. T. Inman's" advertisement, referred to in another column of this paper headed "To the Honorable, the Members of the Senate and House of Representatives of the United States, Washington, D. C.," and continued to insert in your "Family Newspaper" the disgusting advertisement until the "Society for the Prevention of Vice" requested you to desist.

That the insertion of the "Rev." Jos. T. Inman's demoralizing advertisement in your "Family Newspaper" was not a mere accident on the part of yourself or employés is shown by the fact that you still persistently continue to publish, and in the local column of your "Family Newspaper" too, beastly advertisements of frauds, and in the very issues of your "Family Newspaper," in which you assail me, as the following specimen advertisement from your "Family Newspaper," page 2, column 4, December 14th, and also page 3, column 4, December 28, 1882, respectively, will prove:

ERRORS OF YOUTH.

A GENTLEMAN who suffered for years from Nervous DEBILITY, PREMATURE DECAY and all the effect of youthful indiscretion, will, for the sake of suffering humanity, send free to all who need it, the recipe and direction for making the simple remedy by which he was cured. Sufferers wishing to profit by the advertiser's experience, can do so by addressing in perfect confidence.

JOHN B. OGDEN, —— ——.

In the same issues of your "Family Newspaper" there are two other advertisements just preceding the above, offering to cure diseases "Free of Charge."

A "Family Newspaper" beyond want, like the "Delaware County Democrat," should be above avariciousness so depraved as to print what is plainly a swindle, and thus tacitly endorse it to its readers, for a few miser ble dollars, demoralizing to the readers of your "Family Newspaper" and especially to the innocent youths of Delaware County, who may be so unfortunate as to be members of families taking your "Family Newspaper." Now you, who, without either shame or decency, permit swindling advertisers to pander to the lowest instincts of human nature through your "Family Newspaper," for the consideration of a few dollars, pretend to sit in judgment on respectable publishers and business men. Fie! Fie! Before you again unjustly force the Agent's Herald on the defensive, purify the columns of the "Delaware County Democrat."

Respectfully,
L. LUM SMITH.

There are thousands of other journals besides the "Delaware County Democrat," and we regret to add, many of them religious journals too, that are guilty of tacitly aiding such disgusting frauds as the "Rev." Jos. T. Inman, *alias* Allison & Hearne, *alias* John B. Ogden, New York, *et al.* The public, the readers and subscribers of any publication, have the right to object, direct by letter to the offending publisher, to the insertion of any such obscene advertisement in their "Family Newspaper," and we sincerely trust they will exercise their right whenever they read such advertisements in public print as those above referred to.

With the above before us our next step was to write to the American Bible Society, Bible House, Astor Place, New York, with reference to the matter, and in response we received the following clear statements from C. P. Rowe, Esq., the general agent. We will state in this connection that we have a second communication from Mr. Rowe, in which he gives us full permission to publish his letter, stating that it is written as a personal letter and not officially in his position as agent of the Bible House.

AMERICAN BIBLE SOCIETY.

BIBLE HOUSE, ASTOR PLACE,
NEW YORK, February 15, 1883.

Editor Therapeutic Gazette:

DEAR SIR:—Yours of the 13th has been received. It is now several years since we got rid of the *Rev.* J. T. Inman, but, so far as I remember, the statement of the case by your correspondent is substantially correct. Some ten years ago the U. S. Postoffice had in the Bible House a sub-office, Station D. The person referred to under the assumed name of Inman with *Rev.* prefixed, advertised his mail matter to be sent to this station. This proved to be to him a good and profitable card, as it gave the impression that he was not only really a clergyman and returned missionary, but that he was also in some way connected with the A. B. S. Because of this apparent endorsement, we were frequently receiving letters, not only from the unfortunates inquiring after their

money, but from friends of the society expressing surprise that the A. B. S. should allow a person who was engaged in such business a place in their building. We took steps to correct the evil, but found that we could not compel him to drop the words "Bible House" so long as the postoffice remained in the building. When their lease expired the postoffice went out and then we went after "Inman" again and kept after him until he was forced to give up a hold on the Bible House, which had brought him in a great many dollars. The real name of this person is, I think, Allison. We had difficulty in finding him and getting hold of him, but at last succeeded, and succeeded in our object. I have not heard of him for some time, but the last I heard was that he had an associate or successor in the business. We found when we got hold of him that he was living in high style and reputed to have gained over $200,000 in the infamous business. The postoffice department aided us all it could, but he was very adroit, knowing that his victims only could make the most direct complaint against him and that these, from the nature of the case, would not be likely to come forward.

Truly yours,
C. T. Rowe,
Gen. Ag't.

P. S. You address: "Bible House, Station D." Please note that Station D is not now in the Bible House and has not been for more than four years.

With this considerable foundation for our work, the following correspondence was initiated:

[Letter No. 1.—Copy.]

———— N. Y., Feb. 15, 1883.

Rev. J. T. Inman, Station D, Bible House, Astor Place, New York:

Dear Sir:—Noticed your advertisement. I write for your prescription with the hope it may be of benefit to me. Very truly yours,

---

[Letter No. 2.]

Rev. Inman in response sends the following circular:

[Circular.]

RECIPE

For the permanent cure of Spermatorrhea, Seminal Weakness, Involuntary Emissions, Impotence, and all Diseases caused by Masturbation, or Self-Abuse; such as Weakness, Lassitude, Lascivious Dreams and Eruptions on the Face, &c. The use of this Medicine will prevent the tendency to Consumption and Insanity, to which this evil practice so often leads. It is also a rapid and certain cure for Gonorrhea, Gleety Discharges from the Urethra, Irritability of the Kidneys and Bladder, and Weakness and Over-Excitement of the Genital Organs. For Diseases of Female Urinary and Genital Organs, it is at all times a perfectly safe and sure remedy.

Ext. of Corrassa Apimis,	-	Eight Drachms.
Ext. of Selarmo Umbelifera,	-	Four "
Pow'd Alkermes Latifolia,	-	Three "
Ext. of Carsadoc Herbalis,	-	Six "

Mix well together in a mortar, then put the mixture in a box and keep it covered, or wrap it in paper and cover with tinfoil to exclude the air. For a dose, take about half a teaspoonful of the mixture, and moisten it with a little cold water in a glass or cup, then add about two tablespoonfuls more of cold water, or just enough to enable you to take it down easily. Take the medicine at night before going to bed, and in the morning before eating. If you wish to sweeten it, you may add as much sugar or syrup to each dose as may suit your taste.

Remarks.—The above named herbs, so remarkable for their healing qualities, are found in the great valley of the Amazon, and through most of the valleys of the South American mountains. Their wonderful medicinal properties are known to the Indian Medicine Men, and also to some of the learned Missionaries from Europe, who reside in South America.

This particular combination of remedies is called the Corrassa Compound, taking its name from the first of the four medicines which compose the recipe when it is ready for use.

The Corrassa Compound acts particularly on the membranes which line the urinary and genital organs, allaying irritation, curing the unhealthy discharges, and imparting a healthy tone to the nerves and tissues which compose these parts. Its tonic properties give strength to the weak and incompetent, while its soothing properties keep down over-excitement of the sexual organs. In Gonorrhea or Gleet, this medicine cures almost like magic. It is also highly beneficial for females who suffer from Leucorrhea, or Whites.

This remedy from South America (the Land of Medicines) is entirely a product of the vegetable world. No deleterious ingredients enter into its composition; no injury to the constitution can possibly occur from its use, and no other remedy will so effectually eradicate mercury and other mineral poisons from the body. On the human system it acts like a charm. It improves the digestion, purifies the blood, gives tone to the nerves, prevents the tendency to consumption, imparts to the skin a fresh bloom, and gives to the countenance an animated and brilliant expression. The good effects of this medicine in my own case you will find related in the following Circular, which you will please read:

CIRCULAR.

GIVING AN ACCOUNT OF HOW I DISCOVERED THE CORRASSA COMPOUND.

The great number of inquiries addressed to me by the public and the medical profession for information about this great remedy, makes it necessary for me (in order to answer them all) to print a short account of its discovery, and the remarkable cure made by its use in my own case. When at college I contracted (through ignorance) the habit of Masturbation, or Self-Abuse, which well-nigh ruined my health, and doubtless would have brought me to an early grave, if it had not been for the providential discovery of this medicine. I tried the nostrums advertised for such complaints, but they did me no good. I then proceeded to Europe, with a view to consult the best medical men of London and Paris, but I was so little improved by their treatment that I began to despair of ever attaining to manhood's vigor. I resided over two years in Europe, devoting nearly all the time my health would permit to the study of medicine, but I was unable to discover any remedy that would cure my case.

Through the kindness of some Christian friends in London, I was offered the position of a Missionary to Para, South America, where a station was established by the London Missionary Society, for the diffusion of the Gospel throughout the great valley of the Amazon and its tribu-

taries. I gladly accepted this offer, as I had read in the books of learned travelers that this part of South America abounds in all kinds of healing herbs and medicines, and I hoped I would discover a remedy that would restore me to health and strength. Accordingly, I sailed from Liverpool in the ship Reindeer, Captain R. I. Marsh, for Para. When I arrived I commenced to perform my missionary duties as well as the feeble state of my health would permit. While traveling through different parts of the country, I devoted my spare time to the study of the medical plants and herbs in which this region so wonderfully abounds. While engaged in these studies, I first learned the virtues of the Corrassa Compound, for which I will always return my heartfelt thanks to kind Providence. This medicine was recommended to me by a learned and venerable physician, named Fernandez Colina, a native of Spain, who had studied medicine in Paris, and had traveled extensively in South America.

To enable my readers to understand the full value of that combination of remedies called the Corrassa Compound, I will state the symptoms of my complaint when I began to use it: I was suffering from general debility; my sleep was disturbed by lascivious dreams, accompanied with emissions, causing lassitude and weakness.

Such was my condition when I began to use the Corrassa Compound. After taking it for a short time, a remarkable change for the better began to take place in my whole system. I took a dose of the medicine night and morning, for about six weeks, and at the end of that time I felt like a new man—every unfavorable symptom had disappeared. Instead of suffering and despair, I was filled with the exultant hopes of a vigorous and energetic manhood. When I felt completely cured, I became convinced it was my sacred duty to make known the discovery of this remedy for the benefit of suffering humanity. I sent an account of my cure, and also some packages of the medicine, to physicians in London, Paris and New York. They wrote back to me the most cheering accounts of the cures they had made among their patients by its use, and earnestly urged me to forward more of the medicine, and to make arrangements for a regular and full supply. I immediately made arrangements for obtaining the remedy in its purity, and engaged with parties in South America to have it forwarded to New York, to which city I have now returned, and where I have made my permanent home. I adopted this course in order that I might be able to supply the remedy to any one who wished to send to me for it, and also to enable me, with greater facility, to publish to the world a full account of this great discovery. I had another motive also for returning to New York. The restoration of my health enabled me to fulfill my engagement to be married, and I hastened with all a lover's ardor to lead my bride to the altar.

As I write, a year has elapsed since we were married, and God has blessed our union with the birth of a fine healthy boy, thanks be to Him for all his mercies. I have thus made known my own case, from a sincere desire to benefit others. No other motive could induce me to publish this confession, and I have no doubt but it will be received by the victims of youthful errors in the same spirit of sincerity and candor which prompts me to write it. I thought my own case bad enough, and my cure almost miraculous, but the numerous letters I am receiving from all parts of the country prove conclusively that this medicine is curing far worse cases than my own. My space in the circular will not allow me to publish the many testimonials which I have received from eminent physicians who have prescribed this remedy with success for their patients.

My much esteemed friend, Dr. J. W. Watson, writes as follows:

ORMOND PLACE, LONDON.

Rev. Joseph T. Inman:

MY DEAR FRIEND—I received the packages of the Corrassa Compound you forwarded to me. I have found it wonderfully successful in restoring to health and vigor those who were afflicted with the disorders brought on by self-abuse. It has also cured patients of mine who had gonorrhea and gleety discharges from the urethra, when all other treatment had failed. I enclose a draft on New York to pay for fifty packages of the medicine. Please send by first steamer. You are doing a good work for the suffering by supplying the remedy at cost price. May God reward you is the prayer of your obliged friend,

J. W. WATSON, M. D.

[Translated from the French.]

The following letter is from my friend, Dr. R. C. Thonet, of Paris:

RUE DE FAUBURG, ST. HONORE, PARIS.

Rev. Joseph T. Inman:

REV. AND DEAR SIR—The Academy of Medicine has reported very favorably on the great utility of your remedy. My experience with my own patients enables me to say that its effects are truly wonderful. Will you do me the favor to send me thirty packages? I enclose a draft on New York to pay for them. You deserve the heartfelt gratitude of the suffering for kindly furnishing the remedy without profit. I remain, my dear sir,

Yours gratefully,
R. C. THONET. M. D.

My Dear Sir:

Your medicine has been successful in curing every case for which I have prescribed it. It is a great discovery in the healing art.

Yours truly,
W. G. GREENFIELD, M. D.
New York City.

Rev. Joseph T. Inman.

I am receiving, daily, numbers of letters from those who have been cured by the use of the Corrassa Compound; but I never, under any circumstances, make known the contents of these letters. Every letter which I receive is burnt by me as soon as it is answered, so that no publicity can be given to the correspondence of those who confide in me. Moreover, the Corrassa Compound has taken such a firm hold on the confidence of the public and the medical profession, that it requires no testimonials from private individuals to recommend its great usefulness.

I will here offer a word of caution about getting the recipe compounded or put up at the drug stores. You must be careful that you do not get inferior or adulterated ingredients.

HOW TO OBTAIN THE CORRASSA COMPOUND.

As the drug stores can not be relied upon to procure new remedies of pure quality, I can forward the Corrassa Compound in packages, ready for use (put up safe from observation), to those who need it, at the price which it costs me. My means make me independent. I seek no other reward for sending the remedy than the satisfaction of doing good, and the blessing of an approving conscience.

The cost of each package (including the government stamp) is Three Dollars and Thirty Cents ($3.30). The postage is twenty-one cents. The price, then, of one Package, sent by mail to any address, is Three Dollars and Fifty Cents ($3.50). If sent by express, Three Dollars and Thirty Cents ($3.30), the party sending for the medicine to pay express charges. Directions for using the medicine, and also some excellent advice to those who are taking it, will be enclosed inside the wrapper of each package. Nothing is put on the outside of the wrapper but the address of the party to whom it is sent. On the receipt, then, of Three Dollars and Fifty

Cents ($3.50), I can send you a package of the Corrassa Compound by mail, all ready for use, or on receipt of Three Dollars and Thirty Cents ($3.30), I can send you a package by express.

The Corrassa Compound can be taken without interfering with the ordinary diet or occupation, and can be taken without any one knowing anything about it, as it is taken simply with a little water, or with sugar and water or syrup, if you like it sweet.

Dear Reader: I have now given you an account of the discovery of this great remedy, and informed you how you may obtain it. It remains with you to decide whether you will accept the proffered boon. I am trying to perform what I consider a sacred duty to suffering humanity, by sending the medicine to those who need it without any reward but the consciousness of doing good.

Are you still in the habit of practicing the degrading vice of Self-Abuse? If so, you must stop it at once, and you should commence immediately to use the Corrassa Compound, which is the only remedy that can remove those morbid sexual desires which, if not cured, will surely lead you to ruin. If you have given up the habit, but still feel the effects of this secret vice, this noble remedy will restore you to manly vigor. Are you afflicted with gonorrhea and gleety discharges, or with weakness and irritability of the kidneys and bladder? Here is a medicine which has never yet been known to fail, which restores these organs to their natural healthy condition, and also gives health and strength to the whole body. As you value health and strength, then, use this remedy to lift you from a state of physical and mental degradation to all the joy and happiness of a robust and vigorous manhood. And may a kind and merciful Providence aid and bless all your efforts, is the prayer of

Yours truly,
Jos. T. Inman.

GENERAL OBSERVATIONS.

I will again offer a word of caution about getting the prescription put up at the drug stores. You must be careful that you do not get the medicine adulterated. I give you this advice because I have received letters from parties who have procured the Corrassa Compound in drug stores, and were not benefited by it, who afterwards sent to me for the medicine and were promptly cured by it. Some doctors and druggists will not take the trouble to procure new remedies, but will try to sell their own stuff, and oppose the introduction of a new remedy, but you should not let your judgment be influenced by such selfish parties.

I am in receipt of numerous offers from different parts of the country from those who wish to become agents for the sale of this remedy, but as I do not look for any profit for sending it to those who need it, and who wish to procure the genuine article from me, I will say here, once for all, that I cannot make any reduction in the price to any one, therefore it is useless for agents to apply to me for it at a reduced price. I will always be happy to send either one or a number of packages to any one requiring the same at the price which it costs me, with the amount of postage and revenue stamps added, as I have already stated.

HOW TO SEND MONEY.

I am often asked: "What is the best way to send money when sending for the medicine?" I will answer, that you can enclose the money in a letter and have it registered, or send a Post Office money order, or a check or draft on some bank in New York city, or by express.

A money order is the safest, but at many of the Post Offices it cannot be obtained. Every Postmaster in the United States is, however, by law bound to register a letter when requested to do so.

I have made these few remarks to satisfy numerous correspondents, whose letters I have not time to answer. I will take this opportunity to return my sincere thanks to my numerous friends throughout the country, who, since the introduction of this remedy, have communicated to me their blessings and their heartfelt gratitude. If I had time to write to those who are desponding, I would offer them such words of encouragement as would stimulate them to renewed efforts to restore their strength and wasted vital force. I would appeal to them to throw aside every thought of discouragement and every despondent feeling. Resolve, with a will that nothing can shake from its purpose, and with an unwavering faith and hope, to win back strength and manhood's vigor. This can be done. Know no such word as fail. Great numbers through this broad land have been redeemed from a life of misery—and why not you? I am often asked the question: "Is this remedy suitable for females who suffer from diseases of the sexual and urinary organs?" I answer, yes; it has always been used in a great number of those cases with very beneficial results. It can be used by females, whether married or single, with perfect safety, and in cases of leucorrhea or whites, accompanied with nervous debility, it is a remedy of surpassing efficacy and power.

NOTICE.—Persons sending for the remedy should write plainly the name to which it is to be addressed, the Post Office, County, and also the State. Please do not forget this. If you send money by express, send a letter by mail at the same time, stating when you sent the money, and at what express office in New York it will arrive. If you wish the medicine sent by express, name the express company you wish it sent by. Any one who sends an order to me, and does not receive the medicine promptly, will please notify me of the fact.

For the convenience of those who wish to call for the medicine, it can be obtained at No. 737 Broadway, New York City.

All letters should be addressed to

Joseph T. Inman,
Station D,
New York City.

[Letter No. 3.]

_____ N. Y., Jany. 18, 1883.

Messrs. Parke, Davis & Co.:

As you are largely interested in the development of medicinal plants unknown to medicine in America, I write for information as to the following:

Ext. Corrassa Apimis
Ext. Selarmo Umbelifera.
Powd. Alkermes Latifolia.
Ext. of Carsadoc Herbalis.

Enclosed find stamps. An early reply will oblige.

Yours truly,

_____

[Letter No. 4.]

Detroit, Mich., Feb. 20, 1883.

_____, *Esq.*, _____, *N. Y.:*

Dear Sir:—We are in receipt of your favor of the 17th inst., making inquiry with reference to the extract of corrassa apimis, extract selarmo umbelifera,

powdered alkermes latifolia, extract of carsadoc herbalis.

We would state in reply that we know nothing about these articles, the names of which are evidently the creation of the brain of some individual interested in defrauding the public by misrepresentation. We would advise you to apply to some competent physician for advice in your case, and not to attempt to consume the trash which you would probably obtain from the source which sent you this absurd formula.

Very truly yours,
PARKE, DAVIS & Co.

[Letter No. 5.]

———— N. Y., Feb. 22, 1883.

Rev. J. T. Inman:

DEAR SIR:—Having made careful inquiry among the druggists in Elmira and Binghamton and elsewhere for the articles composing "Corrassa Compound," I find I am unable to procure them, and now write you for price, etc., if you are willing to supply me with a small quantity.

Yours Respectfully,
————

———— N. Y.

[Letter No. 6.]

OFFICE OF ALLISON & HEARN, 737 BROADWAY,
NEW YORK, February 24, 1883.

DEAR SIR:—Your favor of 22d inst. has been received and contents noted.

It is unnecessary for us to add any further information as to the merits of Inman's Great Remedy than is already printed in his Circular, except probably the fact that we have in our possession thousands of testimonials concerning its efficacy and remarkable cures, which, if they could be made known, would remove any doubt or hesitation; but as we are in honor bound to keep their contents sacred, *we never, with or without* permission, violate that sanctity. You must try the Corrassa Compound on its merits; and we have no doubt you will be pleased with the result. A single trial will convince the most skeptical.

Respectfully yours,
ALLISON & HEARN.

[Letter No. 7.]

Messrs. Allison & Hearn, 737 Broadway, N. Y.:

GENTLEMEN: In response to your circular I enclose herewith in currency $3.50, for which please send me by mail to the inscribed address, one box "Corrassa Compound" and oblige.

Yours truly,
————

This letter brought in response, through the mail, a package which may be described as follows: A wooden box, one and three-eighths by two and one-quarter by two and three-quarter inches in dimensions, with a sliding cover. It bore an outside wrapper or label inscribed as follows: "Rev. Joseph T. Inman's Corrassa Compound, Trade-mark "Corrassa Compound," on one panel. On the other lower panel opposite, the number "5,974, registered April 13th., 1878," 2 internal revenue stamps amounting to 14 cents in value after the following fac simile.

REV. JOSEPH T. INMAN'S

Corrassa Compound.

Trade CORRASSA COMPOUND Mark.

No. 5,974. Registered April 30, 1878.

Ten-Cent Internal Revenue Stamp.

Four-Cent Internal Revenue Stamp.

Removing this wrapper and sliding back the cover of the box we find enclosed, 1st. a circular, of which the following is a copy:

DIRECTIONS.

DOSE—Take about half a teaspoonful of this medicine, moisten it with a little cold water; then add about two tablespoonsful more of cold water, enough to enable you to swallow it easily. Take this quantity night and morning, in the morning before eating, and at night before going to bed. If you desire to make it sweet, you may add as much sugar to the medicine as may suit your taste.

ADVICE TO THOSE TAKING THE MEDICINE.

DIET.—Eat regularly three meals a day, of plain, nutritious food. Do not overload the stomach. Allow between four and five hours between each meal, and do not eat between meals. If you use coffee or tea, do not take either of them strong, and use them moderately. Avoid spices and condiments, such as pepper, catsup, &c. Salt and a little mustard may be used with the food without harm.

ALCOHOLIC LIQUORS should be entirely abstained from, except in cases of great debility, when a little ale or sherry wine may be taken at meal-time for the stomach sake.

TOBACCO should be given up entirely; but if the habit of using it has become too strong to be shaken off, it should be indulged in moderately.

EXERCISE.—You should walk a good deal in the open air. If weak at first you should not fatigue yourself, but gradually increase the distance as you grow stronger. In disagreeable weather you should have indoor exercise with the dumb-bells or Indian clubs; in fact, gymnastic exercises of all kinds is highly beneficial, but do not over-exert yourself at first.

The skin should be rubbed well every night before going to bed, with a flesh-brush or coarse

towel. The private parts should be sponged with cold water night and morning, and if troubled with piles or if there is any irritation about the rectum, wash with cold water and soap at bedtime and apply a little lard or sweet oil to the parts.

Religious associations and the society of refined and virtuous females should be cultivated. Carefully avoid impure thoughts and imaginings, and immoral conversation of any kind.

The patient should sleep on a hard bed, and should lie on his side. He should rise early, and never lie in bed after he wakes in the morning.

If the bowels are costive—that is if they do not act once a day or every other day, freely—a little opening medicine should be taken, such as rhubarb and magnesia, or the "cathartic pills compound" kept at all the drug stores.

By observing these plain and simple rules you will be cured quicker, and these rules should be followed as closely as possible after the patient is cured. The question is sometimes asked, how many packages of the Corrassa Compound is required to effect a cure. In a simple and uncomplicated case generally one package has the desired effect, but in some severe and obstinate cases two or three packages may have to be used.

One package should last the patient ten or twelve days.

JOSEPH T. INMAN,
Station D, New York, U. S. A.

TRADE CORRASSA COMPOUND MARK.

The circular removed, a yellowish powder of a peculiar smell is disclosed. That we might have definite information as to the characteristics of this powder we submitted the package to Dr. A. B. Lyons, of our staff, with the request that he make a thorough examination thereof and report to us We have pleasure in appending the following reply:

DEAR SIR:—In accordance with your request I have made a chemical and microscopical examination of the powder submitted to me as "Corrassa Compound" with the following results:

The powder was contained in a wooden box with sliding cover; outside measure, 7.36 cm. long, 5.35 cm. wide and 3.55 cm. high; capacity 85.25 c. cm. (5.2025 cu. in.). The contents of the box weighed 71.31 grammes, (2.5154 oz. av.) and consisted of a pale fawn-colored powder having a faint peculiar odor, and a taste in which the peculiar bitterness of gentian was recognizable, although partly masked by the clinging sweetness of licorice. The odor also unmistakably reveals the presence of the two drugs named. The powder has a sandy feeling when rubbed between the thumb and fingers, and a pocket lens shows that it is composed in part of distinct cubical crystals, recognized at once as cane sugar. A smaller number of particles, apparently black, are also easily discernable under a magnifier of low power. By passing some of the powder through a fine sieve (19 meshes to the centimetre) these dark particles, together with the crystals of sugar were mostly separated from the remainder of the powder, the weight of this coarser portion being about 25 per cent. of the whole. Microscopic examination of the finer part of the powder showed it to consist partly of a crystalline powder, which dissolved readily in water, and partly of vegetable structures of various kinds. Two distinct forms of starch granules were present, one of them the minute grains peculiar to licorice, the other, large oval granules, similar to those found in the common bean—possibly wheat starch altered by heat. These last were probably present as an adulterant in the licorice or gentian when it was purchased. The other organic structures observed could be referred principally to the two drugs named, although there were present also fragments of the cochineal insect in small proportion.

The powder when dried at 110° C. lost 9.5 per cent. of its weight, the taste becoming at the same time more distinctly alkaline. The loss consisted partly of moisture contained in the powdered drugs, partly of carbonic acid from an alkaline bicarbonate.

Placed in water, the powder partially dissolved, yielding a deep red solution of an alkaline reaction and a taste at once alkaline, bitter and sweet. On adding dilute sulphuric acid to the solution, a strong effervescence was produced, and the color of the solution changed from a carmine tint to a pale orange red. On igniting a portion of the powder in a platinum crucible, a residue was left amounting to 13.2 per cent. of the weight of the powder, consisting chiefly of carbonate of sodium. Direct estimation of the alkali by titration showed that nearly the whole of this was present in the powder in the form of sodium bicarbonate, the quantity of that salt being about one-sixth of the entire weight of the powder.

I have deemed it unnecessary to pursue the examination further, since the results already obtained suffice to show.

1st. That the formula by which this mixture is said to be prepared is—what it appears at first glance to be—an unmitigated fraud. The formula calls for extracts of three drugs. The powder contains nothing that can be called, in the pharmaceutical sense, an extract. Sugar, it is true is "extracted" from Saccharum officinarum, and sodium bi-carbonate may be said to be extracted from the brine of old ocean—but in the language of poetry rather than that of science. No ingenuity indeed can torture the formula given into anything resembling that employed in compounding this powder. Alkermes is the only ingredient named in the formula which appears in the compound, and the name in the formula is disguised by attributing to the innocent insect the impossible character of "broad leaved." Even the number of ingredients present does not tally with that given in the alleged formula.

2d. That the powder consists solely of common and well known drugs, none of them possessing any of the extraordinary therapeutic virtues ascribed to this compound. The remedy, it is true, is for a diseased imagination, and imaginary virtues are all that it is required to possess. A little judicious lying will cure these patients, and our sanctimonious friend is self-sacrificing enough to volunteer to do the lying—for a consideration—videlicet a profit of twenty-five thousand per cent. on a few harmless drugs. A noble example of quiet, unobtrusive heroism, truly!

Who it was that was diligent to plant in the imagination the germs that have thus sprung up into disease, perhaps in this connection it is best not to inquire.

3d. That the ingredients entering into this wonderful medicine are:

Powdered gentian	about	15 parts.
Powdered licorice	"	15 "
Powdered sugar	"	50 "
Sodium bicarbonate	"	17.5 "
Powdered cochineal	"	2.5 "

These quantities are merely a rough approximation, but it is obviously a matter of indifference as regards the effects to be expected what are the relative proportions of the several ingredients.

Yours very truly,
A. B. LYONS, M. D.,
Analytical Chemist.

DETROIT, March 6, 1883.

The cost of the ingredients of the "Rev. Inman's" formula is less than two cents per box; the selling price is $3.50. From this large margin as well as from the attempt to deceive, as above exposed, it will be clearly apparent that this "divine" is not the man of

good works that he announces himself to be. The duty of the medical profession in the premises need scarcely to be referred to. While this duty (the exposition and denunciation of the frauds perpetrated on the public) is plain, it is, however, too much neglected. Public indifference to its own welfare in these matters, and the charge of interested motives on the part of the denouncers of such frauds, are, it is true, enough to dampen professional ardor in this direction, but they are not sufficient to absolve the physician from the obligations imposed on him in virtue of his high calling.

While we have consumed what may seem to some an inordinate amount of space in our exposé of this fraud, we think our readers will justify us in view of the enormous growth which it and others of similar nature have, through the indifference of the medical profession, been suffered to attain.

Medical College Commencements.

THE Detroit Medical College held its fifteenth annual commencement exercises in the Detroit Opera House on the 28th of February last. Thirteen young men were graduated and received their degree of doctor of medicine. The opera house was filled to its fullest extent by an intelligent audience. The address to the public was by Hon. Chas. A. Kent, and the address to the graduates by Professor Walker. The exercises passed off very pleasantly, and at their conclusion the graduates, alumni and invited guests were entertained at Abstract Hall with a collation under the auspices of the faculty.

The Michigan College of Medicine held its third annual commencement at Whitney's Opera House on the evening of the 5th of March. The house was filled to overflowing by an audience composed of the best citizens of Detroit. The stage was elegantly dressed with tropical plants from the green-house of S. Taplin, Esq., and tables were overflowing with boquets sent by loving friends to be distributed to the graduates. The stage was occupied by the honorable the board of trustees, members of the medical profession, as invited guests, and the faculty; the graduating class occupying the front seats in the parquette. The exercises commenced promptly at 8 o'clock, by an overture from Speil's orchestra, which furnished the music for the occasion.

The address was given by the the Rev. E. L. Rexford who charmed the audience for the space of half an hour. Upon its conclusion the President, Hon. Sydney D. Miller conferred the degree of doctor of medicine upon the following gentlemen:

John R. Arnold.	John Livingston.
Fletcher Blagborne.	Alphonzo B. Lull.
Robert J. Boland.	John A. McCauley.
Phileas Bourgeois.	George M. Cutcheon.
Hugh M. Cooper.	Henri Goulden McGrew.
Walter J. Cree.	John McKinlock.
John Garrow.	John H. McLean.
W. H. German.	Wm. N. Meredith.
I. W. Hamlin.	Zina Pitcher,
L. C. Hammond.	William Plunkett.
A. F. Helwig.	Wm. E. Scriber.
Hiram Holden.	George Steuernagel.
Charles L. Lang.	David Stovel.
Lewis M. Linvill.	Hal M. Wyman.

The graduates were then addressed by Prof. J. Burgess Book who after congratulating them upon being admitted into the honorable profession of medicine, gave them that advice, which, should they follow would materially aid them in their early career as physicians.

Upon returning to their seats they were literally loaded with beautiful boquets of every form and variety.

On conclusion of the exercises the invited guests, trustees, graduates and alumni were entertained at the Abstract Hall by the Faculty, to an elegant banquet under the auspices of caterer Hair.

We have attended many medical commencements in our time, but have never seen that of the Michigan College of Medicine excelled.

Thus far this college has received the commendation of the medical profession for its high requirements in preliminary education and the thoroughness of its medical teaching. This complemented with a full course of clinical instruction from abundant material, cannot fail but to make, the leading medical college in the State of Michigan in respect to a thorough medical education.

PRESENTATION.

Prof. Mulheron having resigned the chair of the Institutes of Medicine, Materia Medica and Therapeutics in the college, and whose resignation was accepted by the Board of Trustees to take place at the annual meeting of the college early in April, as he had formed business relations that required his whole time, the students embraced the opportunity at the close of the banquet to present him with the following address, which was executed in artistic penmanship and encased in a beautiful gilt frame:

DEAR SIR:—On the eve of your resignation of the Chair of Institutes of Medicine, Materia Medica and Therapeutics in the Michigan College of Medicine, we, on behalf of the different classes, take the opportunity of tendering you this expression of our esteem and respect.

Realizing the vast importance of your subject in its practical relations to the people, and the fact that our success as physicians will largely depend upon a thorough knowledge and intelligent application of its principles, we have, indeed, reason to congratulate ourselves on having had so able and efficient an instructor.

During the three years in which you have been identified with our College, we have ever felt that you have ever had our personal, as well as our professional interest at heart. You have frequently admonished us of the many difficulties and dangers to be met with in our future career, and have on every occasion clearly indicated the means compatible with personal and professional dignity by which they may be overcome.

While sincerely regretting the severance of your relations with our alma mater and the ties which have existed between us as Professor and students, we earnestly hope that in future hours of trial we shall not be denied the privilege of your counsel and advice.

In taking our leave of you, we respectfully tender you our heartfelt thanks and unite in wishing you and your family the choicest of earthly blessings.

(Signed)

GEORGE STEUERNAGEL,
HUGH M. COOPER,
I. W. HAMLEN,
JOHN GARROW,
WALTER J. CREE,
B. P. BRODIE,
H. R. ELLIS,
GEORGE FARMER,
Committee.

This act of the class touched our colleague upon rather a tender spot, and notwithstanding his athletic constitution, he markedly weakened. Thanks, however, to a sound nervous system, he soon recuperated, and in an eloquent and feeling manner thanked the

class for their beautiful memento, and saying that he would ever remember them and their kindly consideration, as expressed in the address just now presented him. The doctor's feelings nearly overcame him as in broken voice he again thanked and pronounced on the class a final "God bless you all."

Such pleasant courtesies make such marks on the sign board of life as can only be effaced by the unerring hand of man's mortal enemy—death.

The Very Latest—Beef Peptone With Rock Candy.

ON the principle that the old lady who could say no ill of any one, and who, on being pressed to give her opinion of the devil, commended him as a model of perseverance, we are moved to admire the ingenuity and enterprise of the nostrum-maker. Scarcely has the iris recovered from the dazzle of one of his coruscant displays in one section of the firmament when the very retina is paralyzed by a fresh scintillation in another section. Of late years his pyrotechnic displays have been of exceeding brilliancy and the *—ines* and *—ones* and *—ias* have been of such number and beauty as to quite bewilder the senses. But when it was thought that the grandest piece in his repertory had been exhibited a still grander burst forth in all the effulgence of its native glory. The name of this latest effort is "Jensen's Beef Peptone with Rock Candy," a name at once euphonious to the tympanum and delightfully suggestive to the palate. It is announced to the profession in an advertisement from which we quote the following: "In order to overcome the long-felt difficulty in feeding sick children who object to food in any hitherto known form, but never refuse candy, they will, to the gratification of all interested, feed themselves with this sweet Peptone, and pray for more. One ounce of this Peptone represents one-half pound of beef."

We are, of course, estopped in the presence of a boon like this—the veritable "long-felt want," which has been so ardently hoped for and so devoutly prayed for—from any comments on the pharmaceutical possibility, or the ethical propriety, or the commercial honesty of the preparation. These trifles, light as air, it would be inhuman to discuss mid the cries and prayers of the dear children and "all interested." The immortal discoverer (they were *discovered*, not invented), of these scintillating crystals has freed himself, by the very brilliancy of his discovery, from all the restrictions, scientific, codical or otherwise, on his methods; the magnificence of his end justifies his means.

Stimulated by this great discovery, vulgar imitators are already at work, and a "Crystallized Rock (peptone) and Rye" is announced as shortly to appear. Dissolved in a modicum of water, this new preparation will take the place of the old time, vulgar cocktail, so popular as a "pick-me-up" after a night with the boys. A "crystallized Rock (peptone) and Soda Water" is also on the way—an infallible (these remedies are always infallible) specific for acidity, pyrosis, eructations, boborygmi, etc., in delicate females whose stomachs and palates rebel against all other medicines previously given in these distressing affections. Numerous other such combinations are also incubating. It is only a narrow-minded, grovelling scientist who will question the possibility of crystallizing the alcohol, soda water, etc., which enter into these combinations. The genius of the nostrum-maker is not to be trammeled by such earth-born considerations. That worthy is of kin with the candidate for appointment as surgeon during the war, who when asked to describe Scarpa's triangle indignantly exclaimed: "Who in —— cares for Scarpy's triangle when his country's flag is a trailin' in the dust?"

Collective Investigation of Diphtheria.

WE are very much gratified at the responses thus far received to the questions on diphtheria, submitted in our last issue. These have already been of a sufficient number, and of such a nature, as to satisfy us that our plan of improving the general therapeutics of this treacherous disease is a good one. Certainly there is no affection in the treatment of which the physician feels more the need of the advice and counsel of his brother practitioners than he does in this. Because also of the generally unsatisfactory results of the treatment as prescribed in the text-books, there are few who have not been driven to the adoption of some amendment to such treatment. It is these amendments which we desire more particularly to collate. We are convinced that they have not all been recorded even in periodical medical literature. Let not a reader refrain from sending us any modification of any of the stereotyped plans of treatment which he may have found even but a slight improvement, simply because he may deem it too trivial or too simple to report. It is such trifles that, properly combined, give the grandest results. He who fails to report the, to him, most insignificant detail of any plan which he has found more useful than on other, may be depriving science and humanity of more than he knows.

We are particularly solicitous for the success of this plan of improving our therapeutics of diphtheria, both on account of immediate results and because of its influence on similar investigation of other diseases which we contemplate taking up. By means of this plan every vestige of excuse for the physician's not contributing something to the common stock of knowledge is removed. It relieves him from the supposed necessity of contributing an elaborate essay in which is displayed much erudition. It asks him for no opinions of authors, and thus requires not that he should consult these preparatory to sending in his answers. It simply wants his facts, and it makes no scrutiny into his way of stating them, neither does it concern itself in regard to his orthography or his chirography. We again earnestly request a general response on the part of our readers to our queries on the subject of diphtheria.

In order to elicit the fullest possible response to our questions we have extended the time for the contribution of answers to the 1st of May. We trust no single reader will allow this opportunity to contribute something to the therapeutics of a deadly disease to pass unimproved.

United States Dispensatory.

THE publishers announce that the fifteenth edition of this work, so long and favorably known to the medical profession and pharmacists of this coun-

try, is now ready for issue. There has been a complete revision of the work and much of it has been re-written. The amount of new matter is indicated in the fact that the present edition contains one-third more references than the fourteenth edition. The time required for the preparation of this edition was three years, and no other guarantee of the nature of the work than the fact that it is the joint effort of Drs. Horatio C. Wood, Joseph P. Remington and Samuel P. Sadtler, will be required.

A fuller reference to this great work will be found on advertising page 8 of our present issue. The price is $8.00, and for the convenience of our readers our publisher, Mr. George S. Davis, will receive orders. Parties desiring the book will, therefore, address him, enclosing post office order for the amount, at Box 470, Detroit, Mich.

What to Do in Cases of Poisoning.

THE success which has attended the sale of this manual of Dr. William Murrell, demonstrates more clearly than anything else could, the fact that there exists a necessity for such a book. No other book before the profession so clearly and so concisely details the method of procedure in the case of poisoning by any of the known poisons. This is the unanimous expression both of the medical press and others who have examined a copy. A further reference to the book will be found on advertising page 8 of our present issue, from which it will also be seen that the price has been reduced from $1.00 to 60 cents. At this price no practitioner should fail to carry one with him for use in emergencies.

Manganese in Amenorrhœa.

THE interest which has been aroused in the matter of the action of manganese in amenorrhœa, by the publication of the observations of Drs. Ringer and Murrell (an abstract of whose report we published in our February issue) has induced us, in response to a request by a reader, to reproduce in full the original article by these gentlemen, as it appeared in the Lancet of January 6th last. Subsequent experiments by other investigators have very unanimously corroborated the claims made by the noted English experimental therapeutists, and there is already abundant reason to hope that the very uncertain division of our materia medica known as emmenagogues, has received an acquisiton of real merit. As yet little more than the empirical fact has been noted; the *modus operandi* of the drug remains to be determined.

Book Reviews and Notices.

The Journal of the Postal Microscopical Society; A Miscellany of Natural and Microscopical Science. Edited by Alfred Allen, Honorary Secretary of the Postal Microscopical Society. Issued quarterly. Vol. I.
W. P. Collins, Science Bookseller, 157 Great Portland Street, London W., Eng.

This publication represents the work that has been done during the past year by a very active and enthusiastic organization known as the Postal Microscopical Society of Great Britain. Some ten years ago an anonymous writer in Science Gossip suggested that if twelve gentlemen could be found willing to cooperate in forming a little club for the circulation of microscopical slides, it might lead to a very pleasant and profitable interchange of thought and study. The suggestion was taken up by Mr. Alfred Allen, who instituted correspondence and inquiry resulting in the formation, a few months later, of a society or club numbering at the outset 36 members.

The organization has continued to grow and flourish until its roll of membership includes upwards of one hundred names, and its work has become so important as to justify the issuing of this quarterly publication.

The society is divided into circuits of twelve members each, whose names are arranged geographically. A box of slides, contributed by members of the society, is sent by the honorary secretary at fortnightly intervals to the member whose name stands first on the list; he may keep it three days, but must forward it to the next one on the list, and he to the one following, until it returns finally to the secretary, to be sent by him to the first member of another circuit. In this way every member of the society has an opportunity to examine all the slides. The box of slides is accompanied by one or more blank books, in which the members are asked to write such comments as the objects may suggest, and anything else pertaining to any branch of microscopy which they may deem of sufficient general interest.

The journal is made up largely of contributions that have been made in this way by individuals, and it will be found not only interesting but highly profitable reading to any one who makes any practical use of the microscope.

Among the longer articles, we notice the titles, "Lichens," "Diatoms," "Foraminifera," "Spiders, their structure and habits;" "Photomicrography," "Embryology of the Stalkeyed Crustacea," "Adulterations of Coffee and their Detection," etc. Numerous illustrations, which are always admirably executed, add much to the attractiveness as well as to the intrinsic value of the publication. But it is the numberless practical hints and notes that will be to most readers of the greatest interest.

One or two examples may be quoted by way of illustration. J. G. P. Vereker gives these brief directions for mounting objects in glycerine: "Heat India rubber till it becomes sticky, then dissolve it in benzole; put a ring of this both on cover and slide, then let it remain until tacky; place the object in glycerine, float it on if convenient, arrange it in place and press down the cover; wash away spare glycerine, and run asphalt varnish or any other finish as preferred, and the slide is finished. The advantages are, the India rubber sticks in spite of the glycerine, and is elastic, and so a great amount of trouble is saved."

Dr. C. P. Coombs describes his method of making sections of soft tissues as follows: "Having hardened the tissue in the ordinary manner, it is to be prepared for section by embedding it in wax. White wax is melted with about one-fourth its weight of olive oil in a porcelain dish, and the two are well mixed together. When cool the mixture should be of such a consistency that it can be cut into very thin slices with the razor without breaking. If too soft, add more wax; if brittle, add more oil. Prepare a little paper or card board trough about 1½ in. long, ½ in. deep and ½ in. wide; place on a firm level

surface. Melt the wax, without overheating it, and pour into the trough until three-quarters full. Now thrust a fine needle into the piece of tissue to be cut —it should be a cube about two lines each way—dip the tissue into the melted wax, take it out and hold it in the air to cool; repeat this operation until the tissue is well coated with wax. Then hold it in the middle of the trough until the wax begins to set, and fill up the trough with more of the melted wax. When the whole is cool, strip off the paper mould, and having shaved away the wax until the embedded tissue is reached, slice tissue and wax together with a thin razor previously dipped it spirit. Float the slices off the razor in spirit, when they will be ready for staining."

Transactions of the Medical Society of the State of Pennsylvania at its Thirty-third Annual Session, held at Titusville, May 10, 11 and 12, 1882. Vol. XIV. Published by the Society. Philadelphia Times Printing House. 1882.

This is a handsomely printed and bound volume of 467 pages, with a list of the members and a complete index.

One hundred and forty-four delegates and six ex-officer delegates were in attendance. Rather a small number for such a large state. Evidently the falling off came from Philadelphia County, from which only eighteen were present. Of this eighteen we notice the names of our old friends, Drs. Fricke, Hewson, Shoemaker and Atkinson. As Titusville is in the western portion of the state that fact may account for the absence of so many of the society's distinguished members.

The address of the president was devoted to the discussion of the pernicious fallacies of the present age, which arise from logical conclusions based upon incorrect premises. The doctrine of the equality of the sexes he considers as one of these incorrect premises. The subject is examined in its physical, mental and political considerations, which our space prevents us from reciting. The address closes with a quotation from Scotland's Immortal Bard, in which the family relations are so well portrayed.

The society appears in a very happy financial condition, having nearly two thousand dollars as a balance on hand. In the table giving the names of the medical schools of other states than Pennsylvania and their number of graduates, we notice the omission of the "Michigan College of Medicine" and its number of graduates, while the Detroit Homœopathic Medical College, which institution we know not of, is credited with one graduate.

The reports of the standing commiteees are well up to the times and the other papers have more or less merit.

The whole volume is an interesting one and we presume the permanent secretary would be pleased to furnish any one a copy if properly applied for.

Report of the Board of Trustees of the Eastern Michigan Asylum at Pontiac for the Biennial Period Ending Sept. 30, 1882. By authority.

Henry M. Hurd, M. D., Medical Superintendent.
James D. Munson, M. D., Asst. Medical Superintendent.
C. B. Burr, M. D., Asst. Physician.
Emma L. Randall, M. D., Acting Asst. Physician.
Edward A. Christian, M. D., Acting Asst. Physician.
George L. Seagrave, Steward.
Rev. D. C. Jacokes, D. D., Chaplain, Pontiac.
A. L. Lull, Treasurer, Pontiac.

From a brief examination of this report and from hearsay reports of the institution, we are led to believe it to be well managed in all its departments. It labors under the disadvantage of being too small for its contents. To be entirely successful, there should be sufficient room for the proper classification of the patients, and, in a sanitary point of view, the wards should not be too crowded. Judging from the increase of insane persons, and the difficulty in providing for them in this asylum and the one at Kalamazoo, more expenditure should be made in erecting the Northern Asylum. It matters not how well qualified the superintendent and his assistants may be, they cannot meet with the success their qualifications entitle them to, when they are obliged to accommodate over 25 per cent. more than their institution should properly hold.

One feature in the report is highly commendable in a scientific and practical point of view, viz., the attention given by the assistant superintendent, Dr. J. D. Munson, to autopsies and microscopical examination of the brains of those who die. It is in this way only that correct diagnosis can be made and a certainty in prognosis established. Why should not certain forms of insanity have their brain lesions, as well as pneumonia or chronic hepatitis have theirs? It is in such public institutions that this knowledge can only be obtained,and the Eastern Asylum is very fortunate in having a gentleman so well qualified to perform this duty. In the interest of science he should be able to devote his whole time to such investigations.

One more feature of the report to which we desire to call the attention of the Board of Trustees, viz., the inadequacy of the salaries of the chief medical officers for the duties required of them. When salesmen, book-keepers and superintendents of railroads have salaries up to and exceeding ten thousand dollars per annum, a superintendent of an insane asyluum must rest content with his twenty-five hundred dollars and board and lodging. The comparison is odious. The state as guardian of the unfortunate insane should pay liberally for the skill that may return them to their families in sound mind, for by so doing others are stimulated by a higher education to investigate the hidden causes that lead to this great national infirmity.

The Physician Himself.

The third edition of this interesting, and to the young practitioner valuable book, has just been issued. It does not differ materially from the last edition. A book that in so short a time from its first issue, reaches its third edition, must have more than ordinary merit. "The Physician Himself" has this merit, and we advise every young man to procure a copy, and also to read it. We will assure him the cost of the work and the time spent in reading it will return him ten-fold. When we commenced the practice of medicine over 30 years ago, could such a book have been placed in our hands it would have saved us much perplexity and taught us the value of *suaviter in modo*. Address Dr. W. Cathell, Baltimore, Maryland, for a copy.

Report of the Pennsylvania Hospital for the Insane for the year 1882. By Thomas S. Kirkbride, M. D., LL. D., Physician-in-Chief and Superintendent. Published by order of the Board of Managers. Philadelphia. 1883.

This institution has its separate departments for males and females in separate buildings. This is as it should be, and we trust ere long Michigan will

pursue the same course. This is the forty-second report of the institution, and during the forty-two years of its existence 8,673 patients have been treated. The average number in the hospital for 1882 was, males 185, females 223; total number 408. It is evidently a well managed institution, and its reputation as such having been made by the distinguished physician who presides over its management.

Manual of Gynecology. By D. Berry Hart, M. D., F. R. C. P. E., Lecturer on Midwifery and Diseases of Woman, School of Medicine, Edinburgh; Late Assistant to the Professor of Midwifery, University of Edinburgh; Late President of the Royal Medical Society, etc., and A. H. Barbour, M. A., B. Sc., M. B., Assistant to the Professor of Midwifery, University of Edinburgh; Late President of Royal Medical Society. Vol. 2. With one lithograph and 210 wood cuts.

New York: Wm. Wood & Co.

This is No. 2, or the February number of Wood's library of standard medical authors and completes the work. We expressed our opinion of the first volume of this manual, and this, the second, is the completion of a very valuable work. The student who desires a full and complete knowledge of the science and practice of gynecology has only to subscribe for the library for a year and thus obtain in them two volumes the cost of the whole. Like the former volume it is handsomely bound and printed with clean type on white substantial paper.

A Catalogue (Revised) of Indian Drugs. Examined and reported by W. Dymock, B. A., in the Pharmaceutical Journal. (Arranged, revised and corrected for Indian Synonyms, by Pandurang Gopel, G. G. M. C.) Bombay: Printed at the Education Society's press. By Cullen. 1883.

About 350 drugs are enumerated in this catalogue and comprise those generally exposed for sale by Bombay druggists. What are not native Indian drugs are imported from Persia, Burmah and China, and are so designated. The names are given first in Latin, Sanscrit, Hindee, Concanee, or Dekan Gugirath Persian and Arabic, and designates the parts of the plant to be used for medical purposes.

Addresses Delivered on the Occasion of the Dedication of Cooper Medical College Buildings. By Levi C. Lane, A. M., M. D., (Jefferson and Berlin), Professor of Surgery and Member of the Royal College of Surgeons, London, Eng., and by Edward R. Taylor, San Francisco, Cal.

Cooper Medical College, San Francisco, California. Annual Announcement. Session of 1883. Regular course begins June 4th, 1883, and continues five months.

This institution, to its honor be it said, has adopted the three years' curriculum and requires a matriculating examination or other evidence of a fair education.

The University of Michigan Book. 1844—1880. F. R. Chase, Compiler. Richmond, Backus & Co., Publishers, Detroit.

We have in a previous number for 1882 expressed our opinion of this work. We then highly commended it for its usefulness to all those interested in the university and its graduates—every one of whom should have a copy.

Mobile, The Gulf City of Alabama. Its Trade, Industries and Inducements to Capitalists and its Preëminence as a Winter Resort. Address the Louisville & Nashville R. R. Co., Louisville, Ky., for a copy.

It is a pamphlet of over 28 pages of valuable descriptive interest, giving information to the residents of the northern and eastern sections of our country to the health resorts and comforts of Mobile, The Gulf City of Alabama, and how to reach there.

Farm Seeds. Grain and Farm Seeds. Manual. In the interests of the American farmer and the increase of agricultural prospects by means of the improvement of the seeds of field crops. Published by Hiram Sibley & Co., Seedsmen, Rochester, N. Y. and Chicago, Ill., to whom send for a copy.

On the Private Cure of the Insane. By Ralph L. Parsons, M. D., Late Medical Superintendent of the New York City Lunatic Asylum, etc., Greenmont-on-the-Hudson, near Sing Sing, N. Y. Reprint from the Alienist and Neurologist, St. Louis, October, 1881.

A Case of Hydrocele in the Female. By Ellen A. Ingersoll, M. D., Canton, Ill. Report from the American Journal of Obstetrics and Diseases of Women and Children. Vol. XV., No. 11, April, 1882.

The Treatment of Acute Eczema. By Geo. H. Rohé, M. D., Professor of Hygiene and Clinical Dermatology, College of Physicians and Surgeons, Baltimore; Member of the American Dermatological Association. A. M. of the A. P. H. Association, etc.

The Oakland. The St. Clair Mineral Spring. Open the year round. A beautiful illustrated circular. Second edition revised. St. Clair, Mich. Send to W. S. Hopkins, Esq., St. Clair, Mich., for a copy.

Therapeutic Progress.

Nature and Treatment of Asthma.—The majority of authors now believe that the phenomena of asthma are dependent upon spastic contraction of the muscles of the bronchial tubes. Although many other theories have had, and some still have, able supporters, yet the weight of authority favors by great odds the spasm theory, as affording the most rational explanation concerning the nature of true and uncomplicated asthma. It is not at all surprising that many vague and erroneous notions should be entertained with regard to the essential nature of asthma, since death from the disease is rare, and there being, therefore, few opportunities for post mortem examination. Even in asthmatic persons who have died from some other disease there is usually found no appreciable morbid change in the lungs, or indeed any where else, to account for the asthmatic phenomena.

The pathological condition of asthma, whatever it may be, must be sought for in the nervous system, for the affection is peculiarly nervous in its origin. Irritation of the vagus nerve, either at its origin or along its course, will occasion bronchial spasm. Periodic excitement of this nerve, or of some of its fibres, produced either directly, or in a reflex manner by irritation of various organs, is believed to be a common cause of asthma. According to some authors direct irritation of the vagus, or some of its branches, may sometimes be occasioned by swollen bronchial or tracheo-bronchial glands, which by occasional increased tumefaction produce paroxysms of asthma. This is thought to be the explanation of the etiology of the disease when it occurs in children after measles and whooping-cough.

Bronchial asthma occurs much more frequently through excito-motory or reflex action. Thus, irritation of the bronchial branches of the vagus nerve, giving rise to asthma, may be produced by the action of an irritant on the Schneiderian membrane, the skin, the circulatory and abdominal organs. Of such reflex nature is the asthma which is produced by the inhalation of ipecacuanha powder, the odor of dried hay, fodder, rye, pollen, and the like. So also cold water suddenly applied to the feet has been known to excite the bronchial spasm. Indeed, one of the peculiarities of asthma is that the paroxysms may be induced through the action of an irritant on

remote parts. Salter speaks of a case "in which the patient could regulate his asthma entirely by the condition of his bowels. They were, as a rule, relieved every evening. If the customary relief took place, and he retired to bed with an empty rectum, he awoke the next morning well; but if he neglected to relieve his bowels, or his efforts to do so were abortive, he was quite sure to be awoke toward morning by his asthma." Copland, also, has observed that the paroxysms are often preceded by constipation. The cases of hysterical asthma are of an analogous nature, the paroxysms being often preceded by well-marked symptoms of uterine displacement or irritation.

A more common illustration of the reflex nature of asthma may be found in the fact that errors of diet are often provocative of the attack, particularly in persons who are at all predisposed to the disease. Salter says: "Cases of peptic asthma, in which the attacks are caused by pneumogastric irritation, are so common that I think few cases could be found of true spasmodic asthma in which the disease is uninfluenced by the state of the digestive organs, while in a very large number it is entirely under their control. This fact is so patent and so generally recognized, that it has by many writers been made the basis of their classification of asthma: thus Dr. Bree and Dr. Young erect into a distinct species those cases that are dependent on gastric irritation. Therapeutically, the full appreciation of this fact is most important; more is to be done for our patients on the side of the stomach than in any other direction. An observant and thoughtful physician once said to me that he considered dietetic treatment the only treatment of asthma."

According to the theory of Bree, all the spasmodic muscular contractions in asthma are but efforts to get rid of irritating material present in the bronchi; this irritating material being mucus, which is finally expelled, and then the paroxysms subside. But the presence of mucus must, I think, be regarded as having a *post* rather than a *propter* relation to the disease. The first appearance of moist râles and loose cough is looked upon as the harbinger of relief, and it must be remembered that the bronchial spasm subsides coincidently with the first appearance of expectoration, instead of continuing until all the mucus has been expelled.

As to the origin of the sputum, which is often expectorated in very large quantity, I have to say that not only does clinical experience lead to the assumption that a severe congestion of the mucous membrane of the bronchi takes place during the paroxysm, but that Störck has even demonstrated the correctness of this view by tracheoscopic examination, by which he found the mucous membrane of the trachea and larger bronchi intensely congested during the attack. If this is true of the larger, it is reasonable to infer that this hyperæmia exists even to a greater degree in the smaller bronchi. This condition would evidently give rise to the catarrhal symptoms; and it cannot be wondered at that long continued and frequently recurring attacks of asthma should lead to chronic bronchial catarrh, a condition so often observed in confirmed asthmatics.

Concerning the character of the sputum, it is of a grayish-white color, generally frothy and viscid, and contains a mixture of granular and ordinary mucous cells, cylindrical and ciliary epithelium, and sometimes pus cells and particles of blood, all united together in dense and elastic clumps. Leyden, in 1871, discovered in the sputum more or less abundant layers of fine pointed octahedra crystals, the nature of which he was not able to determine, but thought it probable that they were composed of a crystallized substance analogous to mucine. As to the relation of this sympton to asthma, Leyden has advanced the theory that these fine pointed crystals irritate the peripheral terminations of the vagus nerve, and thus through reflex action occasion bronchial spasm. But Leyden's attempts to prove this theory experimentally have not as yet succeeded.

As previously stated, the essential condition in asthma is believed to be spastic contraction of the muscles of the smaller bronchial tubes. This proposition is now so generally accepted that it is, perhaps, unnecessary to set about proving it. I will, however, so far trepass upon the time of the reader as to refer to two or three clinical observations in the disease which seem to me quite sufficient to establish the theory beyond all question. First, we have dyspnœa of an intense and agonizing character suddenly appearing in a person while in a state of apparently perfect health, and in a short time disappearing equally sudden, without leaving behind any marks of disease. Evidently dyspnœa of this nature points to temporary stricture somewhere in the respiratory organs; and what would more probably axplain the nature of this stricture than muscular spasm?

Then, again, we have, besides dyspnœa, well-marked, even shrill sibilant râles, and prolonged expiration, both of which are very prominent symptoms in asthma. Now, we know that when air is forced through hollow tubes of even calibre, no musical sound is produced, but if they are narrowed at certain points, the air in them is thrown into vibration and they become musical instruments. Likewise, the musical sounds observed in the chest in asthma are doubtless the result of narrowing of the bronchial tubes at certain points. And if these sounds aypear and disappear with the paroxysm, what would better explain this circumstance than muscular contraction and relaxation of certain portions of these tubes?

Prolonged and forced expiration has been referred to as a promident symptom in asthma; this symptom also indicates constriction of the medium sized and smaller bronchi. According to Biemer, the inspiratory force acts antagonistically to the constricted bronchial muscles, and forces the air through them into the alveoli; but despite the efforts of all the expiratory forces, the air escapes but slowly and incompletely; hence follows insufficient change of air in the lungs, and distension, which, secondarily, give rise to a sensation of want of air, and to reflex straining of the expiratory forces.

While these and other clinical facts evidently justify the belief that the phenomena of asthma are dependent upon bronchial spasm, yet the question arises, What is the cause of the bronchial spasm? We may say truly that it is often the result of some stimulus applied to the mucous membrane of the bronchial tubes, or to some remote part operating on the bronchial muscles through the intervention of the excito-motory system, but the same stimulus applied in the same way will not produce asthma where the tendency to the disease does not exist. Agents which act in this way can only be regarded as coöperative factors in the production of the paroxysm; before they can excite asthma there must be present a certain predisposition to the disease, a certain unknown something. We are therefore obliged to confess that the ultimate cause of asthma is as yet unknown. All that we can safely affirm is that the proximate condition is muscular contraction, and that the primary disease consists in some peculiar unknown neuroses. With these remarks we pass to a brief consideration of the second part of our subject.

Treatment.—The treatment of asthma, like that of all other paroxysmal diseases, must be divided into the treatment of the paroxysm, and that in the interval. The paroxysm, however, constitutes the principal feature of asthma, and it is for the amelioration of this condition that the treatment is chiefly directed.

The relief afforded to the paroxysm by the use of certain drugs, whose action is well known, furnishes, I think, convincing proof of the correctness of the spasm theory. I refer to that class of drugs known as nauseants or depressants. As soon as their peculiar effect is produced, the spasm relaxes, and the dyspnœa ceases. They act in asthma just as they do in strangulated hernia, viz., by causing muscular relaxation. The drugs of this class which have been

used are tobacco, tartar emetie, and ipecacuanha. The two two first of these are more speedy and positive in their action, but on account of the extreme collapse which sometimes follows their use, they have, I think, not met with general favor. Ipecacuanha, however, is very manageable, and its after-effects are quite innocent. In order to be of most service it should be given in a positive dose—aay twenty grains of a powder—at the very approach of the paroxysm. Salter speaks favorably of this drug, and relates a case illustrating its happy action, as follows: A youth, who had asthma from his infancy, was attacked quite regularly, once a week, being awoke with the paroxysm about four or five o'clock in the morning, and it would continue for several hours before he was able to dress himself. About the middle of the forenoon the paroxysm would abate a little, but would deepen in the afternoon, and toward bedtime become so distressing that he was unable to sleep. Twenty grains of ipecacuanha powder was always sure to relieve the paroxysm within half an hour after taking it, and give him perfect freedom from the disease for one week. Salter says "it was clearly not as an emetic that it (ipecacuanha) acted, but as a depressant, for the relief took place before the vomiting."

Certain other drugs known to produce muscular relaxation have been found serviceable. Opium has its advocates, though I must say I have not seen any benefit follow its use. On the contrary, I think I have seen it do harm, by aggravating the very condition it was intended to relieve. We know that asthma is more prone to occur at night, during the insensibility of sleep, than during the waking hours. Salter explains this fact by supposing that sleep exalts reflex nervous action, through which circuit he thinks the phenomena of asthma are in almost every case excited. Opium he condemns, because it tends to to produce lethargy and sleep, and, in this way, increases excito-motory susceptibility.

But I have found chloral hydrate, although a hypnotic, to act very favorably. It will almost always considerably diminish the severity of the paroxysm, and sometimes will cause it to disappear within a few minutes after the dose has been administered. The dose should be large, from twenty to forty grains. Biermer, Liebreich, Lebert, and some other observers, have seen very satisfactory results follow the use of this drug in asthma.

Chloroform and ether, by inhalation, have been recommended on high authority to allay the bronchial spasm. I do not see why they should not very effectually do so, yet I confess that I have never had the courage to try them. Salter says: "One of the most powerful and speediest remedies which we possess for asthma, to which I should, perhaps, give the first place of all, is chloroform." Walshe says he has seen it used in three cases, and with this result: "Total relaxation of the spasm during the continuance of insensibility, with the immediate return of dyspnœa on the restoration of consciousness," etc. The imperfect change of air in the lungs during the paroxysm, as indicated by the blueness of the surface, would certainly contraindicate the use of chloroform, and I should therefore regard it as an unsafe remedy. The same objection would hold good against ether, though it doubtless would be much less dangerous.

Nitrite of amyl, by inhalation, is a remedy newly introduced into practice, and very favorable results have been reported from its use in the paroxysm by several observers. So far as my personal experience goes, I have tried it in only one case, and in that instance it undoubtedly aggravated the dyspnœa.

The inhalation of fumes emitted by burning saltpetre or stramonium, or by smoking the latter, has long been recognized as possessing a controlling influence over the asthmatic paroxysm. When stramonium is employed, the dried leaves are either smoked in a pipe or in the form of cigarettes. All of the so-called "asthmatic cigarettes" sold in the shops doubtless owe whatever efficacy they may possess to datura. When saltpetre is used, it is almost always in the form of nitre-paper, which is prepared, as is well known, by dipping bibulous paper into a saturated solution of nitrate of potassa. This, when dried, is burned in the apartment of the patient.

Being familiar with the remedial value of stramonium and nitre when thus used separately, it occurred to me that their efficacy might be increased by combining them. During the past few years I have been in the habit of using such a combination, with results so very satisfactory, that I feel justified in recommending the following formula as a convenient and efficient remedy for the relief of the paroxysms of uncomplicated asthma:

℞ Stramonii foliarum, ʒ x.
Potassæ nitratis, ʒ v.
Sem. fœniculi, ʒ ss.
Sacchari, ʒ ij. M.

The stramonium leaves and the fennel seeds should be ground to a powder, not very fine, and passed through a sieve so as to get rid of the stems or coarser fragments. All the ingredients should then be rubbed together in a mortar, without producing a very fine powder. The mode of using the material is to place a small portion of the powder on a dish and ignite it with a match. It should burn slowly and somewhat irregularly, emitting fumes as it burns, which, of course, are to be inhaled. The fumes may be conducted to the mouth of the patient by means of a paper hood placed over his head.

This remedy, if not more efficacious, is certainly more agreeable to the patient and more convenient than the inhalation of the fumes of burning nitre-paper, or the smoking of stramonium. The combustion of paper is always attended by a disagreeable odor, and the fumes, particularly if the paper is not very carefully selected, are apt to be too carbonaceous for inhalation. During an asthmatic paroxysm, when the patient is suffering from severe dyspnœa, smoking is found to be very difficult; hence stramonium cigarettes cannot be very conveniently used. Therefore, the advantages of this remedy are, (1) That it possesses the combined value of nitre and stramonium; (2) That it is free from the disagreeable odor and irritating smoke of burning paper; and (3) That it can be used without any effort on the part of the patient.

There is no medicinal remedy known that can be depended upon to prevent the recurrence of the paroxysms. As asthmatics are generally dyspeptics, and as the paroxysms are frequently provoked by indigestion, there is perhaps no better prophylactic treatment, with the exception of change of residence, than that which is regiminal. The excito-motory action being exalted by sleep, it is important to an asthmatic person that digestion should be over and the stomach empty before going to bed. With many persons, carelessness in this particular is sure to be followed by a nocturnal paroxysm. As the day advances, digestion becomes slower and less energetic; breakfast is therefore the meal at which the asthmatic may with safety eat most heartily, and he should take the opportunity at this meal, if at all, to gratify his palate. As a rule, however, the diet should be of the simplest and plainest kind, yet nutritious. Of course, the strictest abstention from any article of diet that is known to produce asthma should be exercised.

There is nothing that promises so much for the relief and cure of asthma as change of residence to a suitable locality. Salter says "that possibly there is no case of asthma that might not be cured if the right air could only be found." The caprice of asthma is something wonderful. A condition of atmosphere which is well adapted to one case will not always suit another. For many cases, therefore, experience alone will determine the suitable locality. There are, however, certain localities or conditions of atmosphere which seem well adapted to a very large number of cases. According to Salter, the atmosphere of London, contrary to what one would suppose, is very favorable to asthmatics. He says "that

those parts of London, and other cities, that have the city character most strongly marked on them, are those that are most beneficial to asthma, that it is in the central, densest, smokiest parts, that the most striking results are seen." He cites a large number of cases showing perfect exemption from the disease by such a residence.

Sea-side air will often exercise a curative influence on asthma. It has been noticed by asthmatics who have sought a sea-side residence for relief from suffering, that a change in the direction of the wind, from a sea breeze to a land breeze, will often cause a recurrence of the paroxysm. It seems evident, therefore, that a narrow strip of land, very nearly surrounded by sea, would be well adapted as a place of resort for asthmatic sufferers. Newport is thus located, and very favorable accounts are given of the beneficial influence of the atmosphere there on asthma. Dr. Samuel Ashhurst speaks very positively of the relief he has personally experienced from autumnal catarrh, accompanied by intense asthmatic symptoms, by a temporary residence at Beach Haven, New Jersey. So decided and invariable has been the relief that he has continued to resort to that place annually for more than twenty years.

Just the opposite condition of atmosphere, *i. e.*, an atmosphere greatly rarefied, such as is found in high elevations, is known to exert a most wonderful influence over asthma. Dr. Denison, who has studied very carefully the relation of the climate of Colorado to pulmonary diseases, says that in the treatment of this troublesome malady he knows of no remedy that can compare with the light air of this inland region. So fully convinced is Dr. Denison of the beneficial influence of this atmosphere that he adds, "almost without exception, uncomplicated cases of asthma may gain decided relief or a permanent cure in Colorado." He further remarks: "Generally speaking, the relief is marked as the base of the mountains is reached, and often after crossing the Missouri River. If all the results were written, hundreds of the present residents of Colorado could be cited who had asthma months or years before coming here, who had exhausted all the other known means of relief in vain, but who have now been nearly or quite free from asthmatic symptoms since becoming residents of Colorado." By way of illustration, Dr. Denison mentions two or three very striking itstances, an account of which may be found in the Transactions of the American Medical Association of 1876.—W. M. Welch, M. D., in *The Medical Bulletin*, August, 1882.

The Treatment of Syphilis.—More than forty years ago, I practiced medicine in Montgomery County, Alabama, near the Creek nation of Indians. Syphilis was then very prevalent among them, and their medicine-men had the reputation of speedily curing it. Their remedies were, of course, decoctions of native herbs. It was generally known that queen's delight (Stillingia sylvatica) was one of their principal agents. I had supposed that, when this tribe were removed west of the Mississippi in 1837, their secret of curing syphilis had gone with them; but, when I was in Alabama last year, I learned from my brother-in-law, Dr. B. Rush Jones, of Montgomery, the following facts touching this question:

There were, he said, seven or eight years before our civil war, several obstinate cases of secondary syphilis in and around Montgomery, which resisted the usual remedies in the hands of our best physicians. They went the round of the doctors, and could not be cured. At last, one of these was advised to consult a colored man, Lawson, belonging to Mr. N. D. Barnett, a cotton-planter residing in Montgomery County. In a state of despair, he went to see Lawson, put himself under his treatment, and in a few weeks he was perfectly cured. He returned to town rejoicing at his recovery, and soon others of his fellow-sufferers followed his example, went to consult the colored man, Lawson, and were likewise cured. These cures by an obscure negro man, a slave, when the highest representatives of science had failed, were much spoken of in both town and country, and attracted the attention of Dr. George W. McDade, a very intelligent and accomplished physician whom I have known since his early boyhood. Dr. McDade, feeling the greatest interest in the subject, went to see Lawson, who had made these marvelous cures, and obtained from him the formula he had been using so successfully.

Soon after this McDade happened to meet Dr. James Freeny, who gave him the following history of the so-called Indian method of treating syphilis. Horace King, a mulatto slave, resided among the Creek Indians for several years before they were removed west of the Mississippi river (1837), and had learned from them their method of treating syphilis. While Horace was engaged in building a bridge at Tallassee, about twenty-five miles from Montgomery, in 1852, he heard that there were many cases of syphilis on Mr. Gipson's plantation near by, and that Drs. Freeny and Banks were the attending physicians; and he called on Dr. Freeny, and told him that he had learned a method of treating syphilis from the Creek Indians, which was universally successful, and that he would like to show it to him. And for this purpose he proposed to take the worst cases on the Gipson plantation for the experiment. Drs. Freeny and Banks selected a certain number of very bad cases, and turned them over to Horace; and they watched from day to day his method, while they continued their own plan with the other cases.

Horace's selected bad cases recovered more rapidly than Dr. Freeny's milder ones, and then Dr. Freeny adopted the Indian method in the other cases on the Gipson plantation, and has not pursued any other plan since.

So thoroughly convinced was Dr. Freeny of the superiority of the Indian remedy, that he wrote to Dr. Warren Stone, Professor of Surgery in the University of Louisiana, urging him to give it a trial in the wards of the great Charity Hospital of that city.

Dr. Freeny failed to enlist the interest of Professor Warren Stone in the matter, and he made no further effort to bring it before the profession, except by speaking of it to his brethren in his immediate neighborhood.

After Horace's success on the plantation of Mr. Gipson, and the adoption of his method by the two well known physicians, Drs. Freeny and Banks, Mr. Nicholas D. Barnett, a large cotton-planter, sent his servant Lawson, a very intelligent man (before alluded to), to Horace King to learn his remedies, and the method of preparing and using them. Horace readily imparted the desired information, and Lawson returned home, and put the treatment to the test among the negroes on his master's plantation. It was as successful in the hands of Lawson as it had been in those of Horace King.

After a while, other planters in Mr. Barnett's neighborhood followed his example, and set apart confidential servants to take charge of syphilitic cases, and treat them with the Indian decoction. And thus several adjoining plantations had each its negro doctor, all using the same method with equal success.

This was in a rich section of Montgomery County, where there were many large cotton plantations in juxtaposition; some of one thousand acres, some of two thousand and more, having from one to two or three hundred slaves on each, while there were others of less size with fewer slaves.

On some plantations—notably, on Mr. Barnett's—the syphilitic cases, male and female, were sent to a hospital specially set apart for the purpose, and there quarantined till they were cured. They were, during the period of treatment, wholly cut off from all communication with the other negroes on the plantation. This was in the time of slavery, when the intelligent and humane master had the right to protect his people against infectious diseases of all sorts. Syphilis

was thus controlled, and small-pox effectually stamped out, because the sanitary state of the plantation was intrusted to medical men of the highest intelligence, who were authorized by the master to do all that was necessary for the health of the community.

Dr. McDade says: "It is very remarkable how few cases of secondary syphilis, scrofula, and consumption, existed in those days among the negroes; but since emancipation they are very common."

"Is secondary syphilis the parent of scrofula and consumption? Certainly, these were rarely seen among the negroes while in slavery; whereas they are now encountered every day. Secondary syphilis was then less frequent among them than now, because their masters took every precaution for their early treatment and cure. But now the negro is free to contract this loathsome disease, and to scatter it as he may. You may ask, why are they not treated? I answer, many never apply for treatment. Physicians, always the conservators of the public health, never here refuse to treat a case of syphilis because the subject of it is a freedman, poor and improvident."

Professor Samuel D. Gross read an exhaustive paper on the connection between syphilis and scrofula and consumption, before the American Medical Association in 1875, advocating the view that the two latter were the offspring of syphilis, and it would now appear that the history of these in the negro, in slavery and in freedom, goes far to establish the correctness of the views so forcibly set forth by my distinguished countryman.

Dr. McDade says, "that the remedies used by Lawson on Mr. Barnett's plantation, were the same as those used by Horace King. They consisted of ten or a dozen indigenous roots, a handful of each, with a certain quantity of salt, alum, and iron slugs put into three gallons of water, and boiled down to one gallon. Of this the patient took a half pint three times a day. There was also a decoction of roots for washing the syphilitic sores. After obtaining these prescriptions, it was a long time before I made any trial of their virtues. I was deterred by the fact that it would be difficult for any patient to drink and retain half a pint, three times a day, of such a vile decoction. The horrors of syphilis could alone inspire a man with courage to take it. However, I saw that those who did were invariably relieved, whether in the first, second, or third stage of the disease."

"Instead of adopting the so-called Indian remedy as I found it, I began by eliminating the alum, salt, iron nails, and slugs, and all the roots and herbs that I knew must be absolutely inert. I selected the few among them known to possess medicinal properties; and, instead of making a decoction as had been done before, and which had to be made in large quantities every day or two, I had them prepared in the form of fluid extracts, which places the remedy on a scientific basis, and insures uniformity of action. The following is the formula that I and my medical friends have been using for many years."

"Fluid extract of Smilax sarsaparilla, fluid extract of stillingia sylvatica (queen's delight), fluid extract of lappa minor (burdock), fluid extract of phytolacca decandra (poke root), ää ℥ ij, tincture of xanthoxylum carolinianum (prickly ash), ℥ j. Take a teaspoonful in water three times a day before meals, and gradually increase to tablespoonful doses.

"In making the fluid extracts, there is some risk of getting a remedy less efficient than the original Indian decoction, because the manufacturer may use roots that have been kept too long, and lost some of their active principles, while the decoction used on the plantations was always made of fresh roots just gathered from the woods. In making the fluid extracts, we should therefore be careful to have them made from roots recently gathered." While Dr. McDade makes fluid extracts of four of his ingredients, he makes a tincture of the fifth. I do not understand why he did not order a fluid extract of that also. I simply give the prescription as it was given to me by Dr. McDade and Dr. Rush Jones.

Stillingia sylvatica has long been used in the Southern States as an antisyphilitic remedy by both the profession and the laity. Professor Thomas Y. Simons, of Charleston, was the first to call our attention to it (American Medical Recorder, 1828). His favorable report was subsequently confirmed by Professor Henry R. Frost, of Charleston, and by Dr. A. Lopez, of Mobile, Alabama (New Orleans Medical and Surgical Journal, 1846). Dr. Frost thinks the active principle of the Stillingia is somewhat volatile, and says that the root loses much of its activity when kept long. I know that the odor of the recent root is much stronger than the dried. I presume the stillingia sylvatica and the smilax sarsaparilla are efficient agents in McDade's compound fluid extract. Dr. McDade says: "I could detail many cases illustrating the wonderful antisyphilitic powers of this remedy; but I will give you only two: 1. A young negress contracted syphilis from her husband, who resided on a neighboring plantation, and visited his wife generally about twice a week. This was long before the war (1851). They were both treated by the late Dr. Alfred McDonald, and they were apparently cured. But they had several children subsequent, and in rapid succession, all of whom died of syphilis soon after birth. The husband and wife were then treated by the Indian decoction, and were permanently cured, as shown by the fact that they had several healthy children afterwards at full term, who grew to manhood and to womanhood. None of then ever showed any signs of syphilis, nor have any of their children. Those of them who have died, died of other diseases of a climatic character."

"2. A negro girl, twenty years old, belonging to Mr. Cobb, had syphilitic iritis. This case had resisted all treatment by the best physicians of the country. She was nearly blind. She was taken in charge by Mr. Barnett's colored man, Lawson, who gave her the Indian remedy, and she was perfectly and permanently cured, as she never afterwards showed any symptom of the disease. These cases occurred more than twenty-five years ago; and have been under my observation ever since; so you will see that the cures are permanent."

"Mr. Barnett has pursued the same method on his plantation since emancipation that he did during slavery. His man Lawson uses the same compound decoction now that he did in olden times, and cures many cases every year on Mr. Barnett's plantation, and on those adjoining."

Dr. McDade has used his compound as an alterative with great success in scrofula, and he thinks it would be worth trying in some forms of cancer.

Dr. Rush Jones, residing in the city of Montgomery, has a larger field of observation than Dr. McDade, residing in the country, and has really had a larger experience with McDade's antisyphilitic fluid extract than anyone else; and he speaks most favorably of it. He has been treating syphilis for more than forty years, and he says he now has but little dread of undertaking the worst cases, since he has adopted the use of McDade's formula. He repudiates mercury and the iodide of potassium entirely, and says they are unnecessary when McDade's formula is used.

Dr. Rush Jones says: "It is a remarkable fact that I do not see more than one case of syphilis in women to fifty cases in the male. I have inquired of a number of physicians in regard to this fact, and their experience coincides with mine. How can this be accounted for?"

I am not familiar with the literature of syphilis, and do not know if the fact alluded to by Dr. Rush Jones has been observed in other parts of the world. If so, it seems to me to have an important bearing on the practical application of the Contagious Diseases Acts. And so would the complete history of the working of the quarantine and isolation of infected negroes on the several cotton plantations in

Montgomery County, Alabama, during the time of slavery and since emancipation, if we could obtain minute and reliable reports on the subject.

I am no authority on the subject of syphilis; and, if any apology were necessary for this communication, it is this:

I was at the meeting of the London Medical Society on November 26th last and heard the discussion on the papers of Dr. Drysdale and Dr. Routh on syphilis. From this, it appeared that we now differ as widely on the subject of its treatment, as we did fifty years ago. And this gave me the idea of writing to Dr. Rush Jones and Dr. McDade for the facts which I now lay before the profession.

I have known Dr. Rush Jones all my life, and I have known Dr. McDade, and Dr. Freeny, and Mr. Barnett, for more than forty years, and have perfect confidence in any statement they might make, or I would never have said a word on this subject. I think great credit is due to Dr. Freeny and Dr. Banks for giving the colored man Horace King an opportunity to demonstrate the value of the Indian decoction in the treatment of syphilis on the plantation of Mr. Gipson. For its success there brought it, with their endorsement, prominently before the community, and extended its use to the plantations of Mr. Barnett and his neighbors.

Too much credit cannot be given to Dr. McDade for investigating the subject, and giving us a formula at once scientific and efficient; for it has proven efficient in the hands of Dr. Rush Jones, Dr. McDade, and many other physicians who have been using it for several years past.

I should be pleased to see the name of McDade used by the profession herefter to designate the formula and the method of treatment herein set forth. The remedy will doubtless be extensively used, at least for a while; and I sincerely hope it may prove as efficient here as it has in the hands of my friends in Montgomery, Alabama.—Dr. J. Marion Sims, in *British Medical Journal*, March 10, 1883.

Aconite.—The aconitine literature has been very largely augmented within the past few years, and the subject has been taken up before in these reports, especially with reference to the admirable researches of Messrs. Wright and Luff, in England, upon aconite root.

But the occurrence of a case of accidental poisoning in Winschoten, Holland, caused by the substitution of a French nitrate of aconitine for the German one intended by the physician, in a dose warranted by the Dutch pharmacopœia for the latter, brought up anew the great difference in strength of the various respectable "aconitines" in the market, and induced the authorities to employ Profs. Plugge and Huisinga to examine several samples and answer the following questions: (1) What is the difference in their action upon animals? (2) What is the difference in their action upon man? (3) What is a poisonous dose of each for animals and man? One of these samples was the fatal mixture with which it is not necessary to concern ourselves, further than to say it was prepared from "aconitin nitric," made by Petit, in Paris, which itself was the next sample.

This consisted of hard, white crystals, soluble with difficulty in cold water. The authors prepared a solution of one-fifth of one per cent., and injected it subcutaneously to prevent loss by vomiting. From the second specimen, "aconitin nitric, von E. Merck, a yellowish-brown powder, easily soluble in cold water," they prepared a one per cent. solution as they expected to use larger doses, and administered it in the same way. The third specimen was labeled "aconitin nitric von Friedlander, in Berlin," but proved to be made for him by Trommsdorf. Of this they also made a one per cent. solution. It was an agglutinated, hard, gummy mass, of a grayish-white color, very easily soluble in cold water.

Their experiments were made in a similar way with all the different samples, and on the same species of animals, namely, frogs, rabbits, dogs and pigeons, excepting in the case of the Trommsdorf aconitine, when lack of material made them unable to experiment upon dogs. The symptoms in all the trials were carefully noted, and described with much detail, but do not differ from the previously recorded signs of aconite poisoning. They observed that the effects of Merck's and Petit's aconitines were the same in kind, but different in intensity, while the action of Friedlander's (Trommsdorf's) appeared to affect the heart less in proportion to its other effects, but the difference was not great.

A table accompanies their paper, in which the doses—proportionate doses per kilogramme—and the result are systematically recorded. Their conclusions are: (1) "Petit's nitrate of aconitine acts at least eight times stronger than Merck's and is one hundred and seventy or more times as poisonous as Friedlander's. (2) That Merck's aconitin nit. is twenty to thirty times as active as Friedlander's, and that there is a certain difference in the kind of action, as well as in the intensity, between the two former and the latter. No wonder that they continue, "since the poisonous strength of the substances sold in the shops under the same name differs so frightfully, the greatest care should be exercised in prescribing aconitine or its salts, since, after the physician has become acquainted with the action of a maximum dose of a certain preparation by experience, there is the dangerous possibility that, by a new purchase, a supply of a very different strength may be obtained, the same quantity of which may prove fatal to his patient."

Such was the case of Winschoten, where the dose was within the official limits of the Dutch pharmacopœia.*

The article has been reproduced in part in the Pharmaceutical Journal and Transactions of England and in New Remedies—the Lamson murder in England serving to keep the subject of aconitine somewhat prominent in the first part of last year.

In addition, there are at least three other important aconitines in the English and American markets of dangerously if not equally varying activities.†

First the aconitia of the British Pharmacopœia, of United States 1870, and the French Codex. A white or yellowish-white amorphous powder, whose authorized dose is from half to one milligramme. Secondly, "aconitia," made in part or wholly from the Indian or Japanese and other eastern aconites, and consisting of or containing pseudoaconitia or other alkaloids thought to be more poisonous than aconitia. Thirdly, the "crystallized aconitine" of Duquesnel, the most energetic preparation ever used in medicine, whose dose is one-fifth to one-third of a milligramme.

[Squibb, who has examined this, says it is a nitrate of aconitine twenty per cent pure.—*Ephemeris.*]

This latter salt has been in use but a short time and that, too, only sparingly, and in the larger cities, its high price and great power preventing its general adoption, but it has so far proved to be reasonably uniform in strength.

In the same line of inquiry is a paper by Messrs. E. L. Cleaver and M. W. Williams before the Pharmaceutical Society (England). They had observed that some specimens of even British aconite extract did not give a tingling sensation to the tongue, and knowing that it was sometimes prepared from *A. paniculatum* in part they procured some authentic extract made from this species as well as from *A. napellus*, which they examined; that of *A. napellus* was tingling; that of *A. paniculatum* not at all so. Then they examined the fresh herb of *A. paniculatum* without finding any aconitine therein. They did find an alkaloid, however, which was bitter but not pungent, and probably may be picro-aconitine of Groues. (*A. paniculata* was at one time officinal both in London and Dublin).

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*Archiv der Pharmacie, 1882.

†See also Dr. Squibb's Ephemeris, not accessible to the reporter until after this report went to press.

The following extract from an account by Mr. Holmes of a visit to an extensive herb garden in Lincolnshire, read before a previous meeting of the same society, explains the importance of the above examination: "Aconite"—two species of this plant are grown to meet the requirements of buyers: *A. napellus*, yielding an extract which is not perfectly smooth unless made so artificially, while *A. paniculatum* yields one which gives more satisfaction on account of its being more easily worked and presenting a smoother appearance and less resinous character. The former plant flowers in May or June, and the latter from the middle of August to the middle of September, when *A. napellus* has scattered its seeds, and its leaves are turning yellow."

Mr. Muney stated in the same body that probably at least eighty per cent. of the aconite roots now in use were not *aconitum napellus* at all, but were from a different species grown in Japan.

Finally the following paragraph from New Remedies, on the different yields of aconitine according to different processes, will serve at least to keep up the complexity of the subject:

"Mr. Schneider tried different processes to ascertain the comparative yield of alkaloid: The process of the British Pharmacopœia yielded only 0.002 per cent. or one part of alkaloid from fifty thousand parts of aconite. Morton's process gave 0.127 per cent. of a light yellow powder. Hirzel's process yielded 0.0046 per cent. Wittstein's process gave 0.14 per cent. in well-formed, isolated, six-sided tablets. Hottot and Liégois' process yielded 0.296 per cent. of crystals. Duquesnel's process gave 0.239 per cent. of well-developed crystals."

The above note was translated from an article in the Archiv der Pharmacie, and contains references to the sources from which the processes are obtained.

It is found, even by the most careful observers, to be no easy problem to judge of the value or even variety of aconite root by simple inspection. The genus aconitum is a large and widely distributed one, and its species often run very close to each other. More than this, *A. napellus*, the officinal species, grows wild in Europe, Asia, and parts of North America, and either in cultivation or naturally has developed numerous varieties, not all of which contain an appreciable amount of aconitine. De Candolle enumerates twenty-nine, and other observers have placed more than twice as many forms under the specific name of *A. napellus*. The roots, too, are very variable, even when of the medicinal species and variety, and of good quality, while those of allied species may resemble them very closely and yet contain little or no aconitine. Mr. E. M. Holmes, in a communication to the British Pharmaceutical Conference, from which the above is in part condensed, after examining (by taste) a number of specimens found that all the inert roots were of later blooming varieties than the typical *A. napellus*. He stated that the German drug was carelessly gathered and ought not to be trusted, and recommends that the British Pharmacopœia require home-grown plants, "flowering in May and June," and does not see why any chemist who has a small piece of garden should not grow his own aconite root.

This extreme uncertainty as to the strength of aconitine as prepared by different chemists led the Pharmacopœial Committee to omit it altogether from the officinal list, and prevents many physicians from prescribing a medicine that may be either absolutely inert or fatal in the same dose, according as the druggist may have this or that maker's article in stock. It was suggested in the Lancet that the prescriber always write B. P. (British Pharmacopœia) after the name in his prescription, and this course is approved by the editor of the Pharmaceutical Journal, but the British Pharmacopœia aconite extract, as actually found in England, appears to be as variable as the aconitines. In the United States we have now no standard aconitine, and for most purposes it may be best to use the Galenical preparations of aconite of the Pharmacopœia (tincture, extract, fluid extract, and the new abstract; the tincture is a little weaker than before). If, however, it is desired to have the alkaloid, it would appear to be safest to order the strongest—Duquesnel's crystallized—and make the dose proportionately small. The apothecary, on the other hand, should never put up Duquesnel's unless the prescription called especially for it, and then not if the dose did not show that the physician was aware of the intensity of its action.—Dr. Wm. P. Bolles, in *Boston Medical and Surgical Journal*, March 15, 1883.

The Absorption of Nutrient Enemata.*—The physiological process by which nutrient enemata are absorbed is still a matter of dispute. Three theories are offered: First, that the food is digested by ferments which have descended from the upper parts of the alimentary tract; second, that the food is carried back by "retrostalsis"; third, that it is digested by a local process.

1st. The theory of the descent of ferments is quite untenable, because the gastric and pancreatic ferments are secreted intermittently and only upon local stimulus; and further, because it is made quite probable by the experiments of Langley that these ferments are destroyed before they reach the colon.

2d. Dr. Henry F. Campbell, of Georgia,† has advocated with much force the theory that there is a reversed peristaltic motion, or as he terms it, "retrostalsis," which carries the injected food into the small intestine, where it meets some of the digestive secretions.

Considerable plausibility was given to this theory by the interesting experiments of Prof. Hal C. Wyman, of Detroit.‡ He injected two dogs, one living, the other dead, with a pint and a half of colored milk; and found that in each case the milk passed up the whole length of the small intestine. In two other living dogs he injected four ounces of colored milk, and found that the fluid passed up to the middle of the duodenum in one, and to the middle of the jejunum in the other. A fifth dog was injected in the same way. A portion of the milk was immediately rejected. The remainder passed no farther than the ileocæcal valve. In the case of a man with a fistula in the colon and another in the ileum, it was found that half a pint of milk injected into the rectum was carried to the ileocæcal valve, "and probably farther."

In further support of the theory of retrostalsis, are some clinical facts which show that, sometimes at least, enemata may pass back into the small intestines,§ or may even reach the stomach and be vomited.‖

Before commenting upon these I will record my own experiments.

1st. Took a fifteen-pound living dog; injected one-half ounce carmine-colored milk. Examined two and one-half hours later: Staining half way to ileocæcal valve.

2d. Ten-pound dog, living (as were all those experimented upon). Injected as in first. Half hour later: Staining to ileocæcal valve.

3d. Ten-pound dog. Injected as above. Bowel full of fæces. Half hour later: Could not detect any passing back of the fluid.

4th. Fifteen-pound dog. Injected as above. Two and one-half hours later: Most of milk in last half of large intestine; slight staining just above ileocæcal valve.

5th. Twelve-pound dog. Injected one ounce of carmine-colored milk. Two and one-half hours later: Bowel full of fæces; nothing above the ileocæcal valve.

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*Read at the meeting of the Practitioners' Society, December 1, 1882.

†Gynecolog. Transactions, vol. iii., p. 268.

‡Fort Wayne Journal of the Medical Sciences, vol. i, No. 1., July, 1881, p. 4.

§Med. and Surg. Hist. of the War, part ii, p. 836.

‖R. Baltry, Virg. Med. Monthly, 1878, p. 531.

6th. Fifteen-pound dog. Injected as in fifth. Two and one-half hours later: Some milk had passed eight to ten inches above ileocæcal valve.

7th. Ten-pound dog. Injected one-half ounce carmine-colored milk. Two and one-half hours later: Milk had gone up only a little distance; large amount of fæces in the bowel.

8th. Ten-pound dog. Injected two ounces of colored milk with some force. Two and one-half hours later: Injection had passed up into the stomach.

9th. Twelve-pound dog. Injected one-half ounce carmine-colored milk. Three hours later: It had passed half way up large intestine.

10th. Ten-pound dog. Same as ninth.

11th. Twelve-pound dog. Same as ninth.

12th. Ten-pound dog. As in ninth, but injection went to ileocæcal valve.

13th. Fifteen-pound dog. Same as twelfth.

14th. Ten-pound dog. Injected two ounces iodized starch and water. Two and one-half hours later: Injection went a little way beyond ileocæcal value.

15th. Twelve-pound dog. Injected one ounce colored milk. Three hours later: It had not gone beyond ileocæcal valve; bowel full of fæces.

16th. Fifteen-pound dog. Previously had given a cathartic which produced a passage. Injected one ounce colored milk. Three hours later: It had not gone above the ileocæcal valve; bowel not empty.

The injections were given with an ordinary hand rubber syringe, and no especial force was used.

There was a source of error in Dr. Wyman's experiments, in that he used very large injections. Even my own were proportionately very large, two or three drachms being as much for a dog weighing ten pounds as four or five ounces for a man.

My experiments therefore showed:

1st. That large injections, forced in, may cause a "retrostalsis" which will carry the mass by the ileocæcal valve and even into the stomach.

2d. That ordinary nutrient injections of two, three, or four ounces, pass back some distance,¶ and may even reach the ileocæcal valve, but do not go farther.

3d. That the injection is carried back much better when the lowel bowel is empty, or comparatively so.

The few clinical observations which show that retrostalsis can take place, show also that it takes place only under peculiar conditions, such as intestinal obstruction, the use of large, forced or very stimulating enemata, inverted posture, etc. The assertion of some patients that they taste the food given by enemata proves nothing.

Since we cannot explain the absorption of enemata by retro-peristalsis, it must be that the process is local.

It is an established clinical and physiological fact that nutrient enemata are absorbed. Bauer, for example, found that in dogs enemata of pure albumen and acidulated or saline meat were absorbed. In my cases about one-half of the milk injected was absorbed within three to four hours. The colon is quite vascular and has a large supply of lymphatics. It is not an excreting organ, as stated by Dr. D. W. Bliss, but its function is to absorb. In solipeds it has a powerful digestive function. The secreted juice has in man a feeble proteolytic power (Eichorst).

Albuminous food, when injected, speedily undergoes chemical changes and decomposition. In some of the early stages of this process it is quite possible that the changed albumen passes into the surrounding vessels. Normal peptic digestion is only a decomposition with many stages in it, during some of which the albuminous matter is absorbed. It is not necessary that albumens be made perfect peptones before they can diffuse into the blood vessels and lymphatics.

Fats cannot be absorbed to any great extent in the colon or rectum. It is not necessary to inquire whether starches can be changed to glucose, since it is always possible to add some form of animal sugar to the enema if that be thought necessary.

So far as my clinical experience goes, injection of milk and beef-tea, especially the former, are very nearly as effective as the peptonized preparations, especially those prepared with acid and pepsin. Dr. Bliss has published some cases which seem to show that mixtures of peptone and beef extracts are very effective. Such mixtures were recommended twelve years ago by Leube and M. Mackenzie, but they are costly. Doubtless solutions of the powdered meat or milk, as used by Debove and Dujardin-Beaumetz, would be useful. I have been unable to convince myself that there is any magic in peptone preparations, or that they are absorbed much more rapidly than carefully prepared and finely divided meat preparations.—Charles L. Dana, M. D., in *The Medical Record*, Jan. 6, 1883.

¶Dr. A. H. Smith has shown this to take place in human beings.

Hydrocyanic Acid Dilute in the Treatment of Gastralgia.—None except those who have had to contend with this trouble know how obstinate it is; often failing to yield to most, if not all therapeutic agents at our command. And it is to its treatment that I intend suggesting a few practical points, and I feel assured they will be appreciated by some, at least by those who have come in conflict with many cases. It has fallen to my lot to have the management of a good many very obstinate cases, and it taxed me severely to find a remedy in which I could place any reasonable degree of confidence in as a curative agent. I could very readily relieve an attack by administering a sufficient quantity of morphia, hypodermically, but this was only palliative, and just so soon as the effects wore off the attacks would return and ofttimes with renewed energy. I will cite a few cases. I have been compelled in some of the cases to stay at the bedside for hours and hours.

Case 1.—Mr. E. S. Powers, æt. about 53 years, blacksmith, well muscled, habits regular and temperate. Was subject to what he termed spells of "bilious colic." Perhaps he would be at the forge, feeling as well as usual and at work, when he would be attacked with very severe pains in the epigastric region. These pains would run back to the spine at a place opposite the stomach, which, upon examination, would be found to be exquisitely sensitive. Also over the epigastric region, it being so sensitive to pressure that he could hardly allow to be touched. Sometimes over the liver would be very sensitive. These attacks were so extremely severe that he would be obliged to take his bed, and had from necessity been compelled to keep chloroform, morphia and chloral in his room to relieve him until he could get a physician.

These attacks would last an hour, and I expect longer were he not obliged to take something for relief. I have often seen him when it seemed as if death was imminent from actual pain. The attacks came at irregular intervals, sometimes weekly, sometimes daily, and again he would have several a day. They came on irrespective of the quantity or quality of food taken. Vomiting was a usual feature in his case, and apart from the ingesta, consisted of a thick, ropy mucous, and in large quantities. The treatment consisted at first of morphia, hypodermically, chloral, sinapisms over stomach and spine, hot bath and strict attention to the diet. The diet consisted of a nutritious but digestible one, and a while only fluid diet. This plan did not effect a cure, but was only palliative. The attacks finally came so often that I could not keep him from under the influence of some anodyne or narcotic sufficiently long for him to give any other drug a fair trial. Tried strychnia, iron, bismuth, etc., through all category of agents at all likely to relieve him. The results in all were alike, an utter failure. He became emaciated, and had gotten to the point where it required as much as one and a-half grains of morphia at one hypodermic

injection to procure rest. I consulted all of my works, and noticed that Elliotson had used the dilute hydrocyanic acid in a few such cases with favorable results. I began with it immediately and administered three drops thrice daily. In about four days I noticed an amelioration of all the symptoms. This was continued for two weeks with a complete cure. However, I supplemented this treatment by administering a ferruginous tonic and allowing a liberal diet. To-day he is in as good health as ever in his life, and is able to stand at the forge from morning till night at his usual vocation. Since five days after beginning with the acid he has not had an attack, not even a symptom of an attack.

The last attack was about September 1st. The cause of the gastralgia was, in my opinion, an engorgement and hypertrophy of the glandular structure of the stomach, the attacks being brought on by the movements of the stomach during digestion. The rationale of the good effects of the dilute hydrocyanic acid was that it allayed the morbid sensibility of this glandular structure of the stomach partially, and mostly, by its direct effect, and partially by its constitutional effects.

I will say here that I had never seen the hydrocyanate of iron fail to relieve or partially relieve all forms of neuralgia, but it did in this case, for I gave it a thorough trial. This was probably due to the failure on part of the gastric juice to dissolve, and the venous radicles to absorb it. It is needless to say that the conditions of the bowels and other emunctories were properly and carefully regulated. He had no fever during his whole sickness to amount to anything.

Case 2.—Mr. T. D. W., æt. 28 years, unmarried, occupation salesman, habits irregular. This patient would indulge in wine too freely, occasionally, which would leave his stomach in a very irritable condition for several days afterward. This finally produced a catarrhal condition of the stomach, ending in severe attacks of gastralgia. The attacks in this case were not as repeated as in case 1, but of equal severity. I will not spend time in reiterating symptoms, but they were very nearly identical to case 1, and yielded to same treatment. The only difference is that he suffered intensely from enteralgia several times. Under the acid treatment he has entirely recovered, and is in fine health, and can "digest a lightwood knot" without pain.

Case 3.—Mr. J. B. D., æt. 43 years, large and muscular, occupation at time of sickness warehouseman, habits irregular and not very temperate. This man suffered with gastralgia and hepatalgia conjoined. The gastralgia in this case was due to prolonged drinking and irregularity in diet. Living on the river and holding the position he did, necessitated a great deal of exposure at night in all kinds of weather and irregularities as regards diet. He was troubled, as in the preceding cases, with severe gastralgic attacks, the pain being at times almost unbearable. He could only be relieved by hypodermic injections of morphia in combination with other anodynes and narcotics. This being only palliative, resorted to the dilute hydrocyanic acid with the same results as in previous cases. Since he has undergone the acid treatment he has suffered no inconvenience.

I could mention a good many more cases of a milder type, some of which only amounted to painful digestion, treated successfully as indicated, but it would be useless.

I have used the acid in conjunction with soda bicarb and valerian, with success in dyspepsia, dependent upon a catarrhal condition of the stomach, and am pleased with it. It is not adaptable to every case, but is valuable in the majority of cases.

The three cases cited in this article were the worst I have ever seen, and indeed I cannot conceive of the disease being worse without the patient succumbing under it.

My object in writing this article is to confirm the views held by Elliotson as to the efficacy of the dilute hydrocyanic acid in the treatment of gastralgia.

Furthermore, my observations agree with his in regard to its efficacy or failure in a very short time. It is not necessary to persist in its use to find out its good effects or failure, for it is very prompt in its action. I will offer no further suggestion as to the *modus operandi* of its action, other than the one already adduced, that by allaying the morbid sensibility of the stomach, gave it time in which to perform its functions unmolested. I claim no originality in this treatment, but I desire to gain a stronger claim for the dilute hydrocyanic acid in the treatment of gastralgia.

Would like some to try it if they have suitable cases.—J. Thos. Slivall, M. D., in the *American Medical Weekly*, Dec. 16, 1882.

On Manganese in the Treatment of Amenorrhœa.—We are desirous of calling attention to the value of a very simple remedy in a very common complaint. For some time past we have used permanganate of potash with much success in the treatment of certain forms of amenorrhœa, and are satisfied of its value. Our observations have extended over a period of thirteen months, and we have now notes of sixty-nine cases. The majority occurred in hospital practice, but some were private patients. A small number remained under observation for a few weeks only, but the majority continued to attend for a much longer period; so that in some instances we have a complete record of the menstrual history for a year or more. In some cases the amenorrhœa was the cause of the patient seeking advice; in others its existence was mentioned incidentally, the patient suffering from some other complaint. Our cases are such as come under the care of the general as distinguished from the obstetric physician, and do not include those requiring operative interference. As a rule we refrained from making a vaginal examination, but with this exception our notes are complete. We have used the permanganate in two forms, first the pharmacopœial solution, and secondly the permanganate made into pills, each containing either one or two grains. Generally we begin with a grain three times, and then gradually increase the dose to two grains four times a day. Our most striking results have been obtained with the larger doses; a large dose sometimes succeeding admirably after the failure of a small one. Before commencing treatment we inquire carefully into the menstrual history of the patient, and as a rule give the remedy only for the three or four days immediately preceding the expected period, but should it fail to produce the desired effect we direct the patient to continue steadily taking it, and in some cases it has been taken continuously for nearly three months. In our experimental observations we have given the one drug only and have done nothing in the way of accessory treatment. Our most striking results have been obtained in young women between the ages of eighteen and twenty-five, who from some accidental or trivial cause, such as catching cold or getting wet, have "missed" once or twice after having been regular. The administration of one or two grains of permanganate of potash in pill three or four times a day for a few days before the time of the expected period will bring on the flow almost to a certainty. In some instances the periods were brought on after the patient had ceased menstruating for over a year. In the case of country girls who have "seen nothing" for a month or two after coming to town the treatment has answered admirable. Often enough patients do not consult their doctor until they are "overdue," until the time of the expected period has passed by for some days. Even then the prompt administration of permanganate will often bring on the flow at once, but should it fail to do so the treatment ought to be continued, and the patient will probably menstruate normally at the next monthly time. Generally our efforts are not crowned with success until

the medicine has been taken for at least three or four days, but in some instances the permanganate acted with striking rapidity, the menstrual flow making its appearance after only two or three doses had been taken. It is not necessary to discontinue the treatment on the appearance of the menses; in fact, we generally tell the patient to continue taking the pills three or four days longer, finding that it facilitates the flow. The permanganate often succeeds well after the failure of other remedies, such as iron, aloes, nux vomica, strychnia, pulsatilla, nitro-glycerine, and hot mustard baths. Sometimes, however, it is necessary to give it for six weeks or even longer before the desired result is obtained. In those cases where the patient has menstruated only once or twice, and has then entirely ceased for some months, our treatment answers well; the menstrual function is re-established, and thenceforth proceeds normally at every successive monthly period. In some cases there was no actual amenorrhœa but the flow was scanty, lasting perhaps only a single day, or it may be only a few hours. Here the administration of the permanganate prolonged the flow, and even in some instances when it had ceased brought it on again.

In girls of about fifteen or sixteen, who have never menstruated at all, the permanganate, as might be expected, is not so certain in its action; but even here it not infrequently acts promptly, bringing on the flow at once. In some cases where the general health was bad, and the permanganate had failed, we suspended treatment for a time, and sent the patients into the country for a month. On their return we gave the permanganate a second trial, and it succeeded at once. We have, however, sometimes failed to bring on the menstrual flow even when the patient was in fairly good health, and when there were the usual indications of puberty.

It is not only in the case of young women that manganese is so useful, it succeeds almost equally well with women between thirty-five and forty, who, as the result of many pregnancies and much suckling, have ceased to be regular. Here, for example, is a typical case. A married woman came to us complaining that she was never regular. She had had nine children in as many years, and rarely saw anything more than once between her pregnancies. She had been suckling for eight months, and had not been poorly for seventeen months—the nine months she had carried and the eight months she had suckled. She was not in the family-way, but said she expected she would be soon if she weaned the baby. She did not know when she ought to be poorly, and had given up all expectation of seeing anything. She was ordered two one-grain permanganate of potash pills four times a day, and came on poorly a fortnight after, the first time for seventeen months.

We need hardly say that before treating the amenorrhœa care should be taken to see that the patient is not pregnant, although we are satisfied that the permanganate given in the dose we recommend has no power to produce abortion either in the early or late stages of pregnancy. We find that manganese fails to induce the flow when the amenorrhœa is due to advanced phthisis. But in some cases of arrested phthisis the treatment was successful, and the patient, after a time, under the influence of the permanganate, menstruated freely and at regular intervals. In several instances patients informed us that the pills had proved of value in curing "whites" of long standing. As a rule the permanganate is taken without difficulty, but patients much prefer the pills to the solution. The solution is peculiarly disagreeable to take, and in some cases produces nausea and even vomiting. Patients frequently complained after taking the pills of a heavy persistent pain over the upper part of the sternum, "as if something had stuck there and would not go down." This was not due to the drug being given in the form of a pill, for the same complaint was made when the same dose was given in solution. One patient said the pain was of a burning character, and another said it was like heartburn. A girl of sixteen, to whom two two-grain permanganate of potash pills were given four times a day, said the pain, "like a lump at the chest," came on immediately after each dose, and was so intense that she had to go to bed for two hours.

That the effects we have described are due to the manganese, and not to the potash in the salt, is shown by the fact that manganate of soda and binoxide of manganese are equally efficacious in the treatment of amenorrhœa. The manganate of soda was given in two-grain pills, two four times a day; and the binoxide in four grain pills, one four times a day. It may be thought that the manganese acts by inproving the condition of the blood, but this is not the case. The treatment succeeds equally well in the plethoric and in the anæmic. Given in cases of chlorosis, the permanganate not infrequently brings on the period without in any way improving the anæmia.—Drs. Ringer and Murrell, in *Lancet*, Jan. 6, 1883.

Materia Medica—Its Position as a Branch of the Art of Medicine.—In medicine, as in everything else, "the middle course is the safest," is a good and safe proverb to remember. Over-drugging is certainly an evil, but equally so is scepticism in the use of drugs. It is easy to scoff and sneer at those who have faith in the remedies they use, and to ask for a rationale, as yet perhaps not thoroughly understood, as to the manner in which a drug effects the purpose for which it is given, but observation teaches that those men are the most successful in the results obtained in their practice, who have faith in the remedies they use, and who do not prescribe them as a mere matter of routine, but who, having a definite object in view, give them with due consideration, and watch and note their effects with keen interest. Such men have an unceasing and continually increasing interest in their profession, and are prepared to fight to the end for the life entrusted to their care, with a zeal that cannot be experienced by those who are not possessed of the same faith, and who practically are mere believers in the doctrine of the survival of the fittest. Whilst freely admitting that much has been done, and that much good is likely to be accomplished, by "preventive or hygienic" medicine; all the good, that is anticipated by enthusiasts in that branch of our art, is not likely to be attained —at least, not until the millenium arrives. It is hard to believe in the perfectibility of the human race. So long as men exist, so long is it likely that there will be disease, and so long as there is disease, so long will the necessity for the use of drugs continue, and materia medica, in its therapeutic sense, will hold an honored place as a branch of the art of medicine. In his address to the members of the "Medical Union Society" of London, Dr. Richardson has used an expression, the interpretation of which is open to some doubt as to its real meaning. Speaking hopefully of the preventive side of medicine, and rightly so, he says, "Materia medica must also grow of less importance, for presently all men would become wise in their estimate of drugs, and would call for them as reluctantly as the members of the profession did themselves when they were out of health." Do medical men at present refrain in their own cases from the use of drugs because they disbelieve in their efficacy. If such be the case, the standard of professional honesty and morality must be a low one, representing men as capable of prescribing for others things in which they themselves have no faith, and which, since they are known to possess some active qualities, must, if not beneficial, be positively injurious to their patients. The only justification a man can have for administering to any one a drug is his belief in its likelihood to prove of service. Unbelievers in the efficacy of medicine should have the courage of their opinions. They should honestly tell their patients they have little or no faith in medicines, and, above all, they should carefully record and publish for the guidance of others the results of their

practice. Once let it be seen clearly that all diseases have a fixed course, unchecked or unaltered by treatment, and a grave responsibility will be removed from the shoulders of the members of the profession, and their task be made an easy one. This consummation has not as yet been arrived at, nor is it likely to be so at an early date.

By all means place people in healthy surroundings, and educate them in all the rules that are necessary to the preservation of a healthy life, but do not cast any reflections upon the means by which health is to be restored when diseased action is once set up. The enlightened use of drugs is surely one of those beaten paths "laid down in the grand old history of medicine," from which his hearers ought to have been warned not lightly to depart, or to think slightingly of; the rather, ought they to have been urged to zeal and industry in the exact observation of the effects of drugs, and the exact record of the conditions which lead to their exhibition, and the effects that were expected from their use. Such study would go far, if honestly pursued, to place the art of prescribing on a sound foundation. All must admit that much solid work has been accomplished in this direction; our knowledge of the action of many drugs is as definite as we can reasonably expect it to be, if we take into consideration the peculiar idiosyncrasies that are occasionally to be found in different constitutions, and which set at defiance all our previously acquired experience, and which are unrecognizable until discovered by the test of experiment. Whilst readily admitting that in many instances there is a tendency to cure on the part of the natural powers of the body, still, Nature, if left to herself, does not always prove a successful physician, and is often glad of a little help to get her out of a difficulty, and to re-establish the balance of power amongst the various organs of the body. Without the help of our art, excitement and pain remain unsoothed or unrelieved, or there is failure on the part of the excretory organs to remove the waste products of the body when diseased action has taken place. Collective work and the severe habits of observation and deductive reasoning that such work is likely to foster, will do much to bring forward a vast amount of evidence on such points as these, and, in time, much, that is at present a scattered and floating kind of clinical experience, will be brought together and crystallized into definite knowledge.

Certainly he who has not faith, and does not use in the spirit of faith, properly guided by careful consideration, and an ever-increasing experience, opium, ipecacuanha, mercury, arsenic, antimony, ergot, iron, zinc, phosphorus, bismuth, and their preparations, chloral, croton chloral, aconite, belladonna, sp. eth. nitrosi, sp. eth. sulphurici, quinine, iodide, and bromide of potassium, and many other drugs, can never be a thoroughly successful practitioner in the curative results of his practice; nor can we believe him to be a happy one, if possessed of a conscience, since he must see many cases—that in other hands might do well—go from bad to worse, and end fatally in his.

Many men doubt the efficacy of drugs because their efforts have not been attended by success; but this want of success is more often not the fault of the remedies themselves, but the fault of the prescriber, who fails, from the want of an almost intuitive tact, in the selection of the best drug, or drugs, and in their proper combination and dosage. How frequently one sees a patient, who, under the treatment of one man, drags on wearily from week to week, no better—often, indeed, going from bad to worse—under another man's care rapidly improve, and from the very rapidity of recovery, giving proof of the efficacy of the drugs employed. Instead of lowering the estimation in which our materia medica is held, increased knowledge is likely to carry it to a still more honored position, when the powers of each drug, from accurate observation, become more thoroughly defined.—*The Medical Press*, Feb. 28, 1883.

Treatment for Tapeworm.—The writer has for many years past received occasional letters of inquiry as to what is the best drug for the expulsion of tapeworm, and the inquiry is generally accompanied by the statement that a case is under treatment which had resisted all the ordinary parasiticides, such as pumpkin seed, male fern, kooso, bark of pomegranate root, turpentine, etc. As any one of these drugs is sufficient, under any ordinary good management, to expel the parasite, and as the inquirers had generally succeeded in most of their cases with some one or other of these medicines, it has generally been concluded that it was not a question of the choice of a drug in the obstinate cases, but rather one of the location of the attachment of the head of the worm in the intestinal canal.

When the writer served as demonstrator of anatomy, many years ago, he observed that there was great variation in the location of the head. Sometimes it would be found attached up near the duodenum, and at other times down near the ilio-cæcal valve, and that the attachment was not unfrequently in a little pouch, or under a fold of mucous membrane; and that the head was always imbedded in a nidus of firm, jelly-like substance, like inspissated mucus. This led to the conclusion that such cases would be very differently affected by treatment, and that a method quite efficient for some cases would be likely to fail in others, from the difference of location; and further, that the obstinate cases were those where the attachment was so low down in the canal, and so protected, that it was difficult to get the parasiticide in contact with the head so as to poison it, and cause it to let go its hold. A few years later, when in the eastern part of the Mediterranean, where uncooked sausages are largely eaten, the writer and others became affected with tapeworm, and he had good opportunities for observation, and was confirmed in the belief that the location of the head had much to do with the resistance of all obstinate cases, and that when the treatment was carefully directed by this consideration it was almost always successful, and that one parasiticide was about as good as another when well managed. Further experience at that time seemed to show that pumpkin seed and oleo-resin of male fern were the best agents to use, and that there was but little choice between them. A plan of treatment was adopted which has been since given to so many physicians and patients with such general success that it may be worth while to publish it.

After a light dinner, near the middle of the day, the patient should take no food, but may drink freely of water. At bed-time a saline aperient should be taken in effective dose, and there is nothing better than one or two Seidlitz powders. This aperient should be a saline, because these cause a copious effusion of serous liquid from the whole mucous membrane of the canal, and this effusion taking place from the surface where the head of the worm lies protected by the dense mucus, detached the mucus and washes it away, leaving the head bare for contact with the parasiticide, when otherwise it would pass over it without direct contact, and, therefore, without effect.

Whether this aperient at bed-time operates or not, it should be repeated on the following morning, the patient still abstaining from food. After the second saline has operated freely, or say at about ten o'clock, the medicine should be given.

Four ounces of pumpkin seeds are well beaten in a mortar, half an ounce at a time, a few drops of water being added from time to time, until they are made into a paste. The shells need not be rejected, as they are rather useful than hurtful. Water is then gradually added to the paste, with trituration, until a tolerably uniform emulsion is made, measuring about a pint. This may be flavored, if desired, and iced, and is to be given in three doses, at intervals of about two hours, beginning at about ten o'clock. During this time the patient should lie quietly in bed, and avoid all causes of nausea and vomiting, and

should correct these, if they occur, by a little ice taken into the mouth and stomach. The stomach in need of food will often digest the first dose, but a tendency to nausea will prevent the digestion of the others, and the third is often difficut to take without vomiting. By careful management and quiet the inverted peristaltic action may be generally avoided. But when it occurs early, and is persistent, the treatment is likely to fail, because of the inverted action or the bowel prevents the emulsion from getting far enough down to come in contact with the head of the worm. Commonly, however, the peristaltic action will not be reversed, and about the time of the third dose, or a little later, there will be an alvine evacuation. But if not within an hour after the last dose, a half fluidounce of castor oil should be given in a little ale or porter. The evacuations should be received in a vessel partly filled with water, so that the worm can be easily examined from end to end of each portion without breaking, and when the part is reached where the links grow smaller, great care should be taken to find the head, for unless this be found the success of the treatment is by no means assured. And if the head be not found, detached links may be expected in the stools within three or four months, and the treatment will need to be repeated, with larger preliminary fasting and greater care.

In the second trial, or when persistent vomiting has interfered with the first, to invalidate it, the oleo-resin of male fern may be substituted for the pumpkin seed. This is more easily taken than the large doses of emulsion, and is not so easily digested by the stomach, nor so liable to produce nausea, and from being an oleo-resin, and therefore less soluble in the liquids it meets with, it is more likely to reach the head of the worm in a condition sufficiently concentrated to be a poison to the head, but it is probably a less active poison to the head than the pumpkin seed, and therefore less sure.

The oleo-resin may be given in emulsion made with sugar and gum arabic, or with glycogen, but is perhaps better given in capsules containing about ten grains each. Two of these should be taken every quarter of an hour until twelve capsules have been taken, unless nausea occurs of sufficient severity to endanger their rejection. Under such circumstances eight or ten capsules may be used, as being all that can be safely given.

The oleo-resin has often, especially in cold weather, and when of good quality, a thick, granular sediment. This should be carefully stirred in before weighing, as it is a very important part of the drug.

Of course, the same careful preparation of the patient is needed with this as with the pumpkin seed, and neither of them should be expected to succeed in obstinate cases without the careful preliminary treatment.—Dr. E. R. Squibb in *Ephemeris*.

The Medical Profession Responsible for Proprietary Medicines.—The medical profession is responsible, and should be held so, for the success of nearly all the proprietary medicines that adorn the shelves of many of our first-class drug stores. And why, the question is asked, do these patent nostrums have so many votaries and meet with such success? The question is easily answered. Nearly all such alleged remedies are the result of prescriptions written by educated medical men and for a legitimate purpose, or for a stipulated sum, and most of them accompanied by the certificates of weak-minded professional men, as well as simple-minded hypochondriac patients. To illustrate this: Many years ago, a professor in one of the most respectable medical colleges in New England, on his return from Europe, was called upon by one of the leading druggists for advice, and on being told his case was dyspepsia, wrote him a prescription. After the druggist's health was restored he used the prescription for a proprietary medicine, and the result was a fortune, for it was endorsed by many of the leading physicians of New England, including some professors whose memories are cherished by the members of this Society. The druggist retired on a fortune, while the professor died comparatively poor. This is only one case out of a great many. Like quackery, all such medicines would have had an early grave, and pæans of victory would have been sung, but for the influence of those men who would scorn to be called quacks. That patent or proprietary compounds should hold such influence may be surprising to many, yet when we take into consideration that from worm lozenges up to the great health restorer "par excellence"—cod-liver oil—not only receive the sanction of the charlatan and ignorant, but of a large percentage of educated men and even women in the different professions, who are daily indorsing the glowing accounts of the wonderful cures as set forth by the pharmacists, when reason and common sense should teach us that the latter possesses no medical curative properties, that lucca oil, fresh butter or oleomargerine does not contain. A large share is procured from dog-fish and other sources, and sold for genuine cod-liver oil, to be prescribed for nearly every disease, both known and unknown. At the present time there is a large competition between wealthy firms in the trade of cod-liver oil and its various emulsions, and that for the very reason that they receive the sanction and are endorsed by scores of what we would consider first-class physicians, and this done frequently for a stipulated price or a few bottles as samples. I would as soon endorse Mrs. Winslow's Soothing Syrup, Lydia Pinkham's Compound, or the honest Shakers' remedies. Gentlemen, my word for it, no patient ever got well on cod-liver oil that would not get well on lucca oil or fresh butter. What will scientists say twenty years from now, or even the honest doctor? Cod-liver oil will be cast aside and ignored, like thousands of other exploded theories or humbugs. Twenty years from today the poet will sing of it as the lost cause, and it will read something like this:

> O wondrous fish! of creatures chief,
> Create, to give new life to man;
> For sorest pain to bring relief
> And lengthen out his mortal span,
> O glorious cod! is thy small liver,
> Of health and strength, my ailing giver.
>
> So thought the world in days gone by;
> But now, go tell it to the fishes,
> E'en they will answer, with a sigh,
> Things go of late against our wishes;
> The sons of men no longer toil
> To win the great cod-liver oil.

—*President's Address, N. H. Medical Society*, June, 1882.

The Action of Hyoscyamine.—The communication in the Journal of November 25th, on the "Therapeutic Effects of Hyoscyamine," is very interesting, and the conclusions drawn from two years' experience of the drug are of great weight. I am quite at one with the naval surgeons in regard to the uncertainty of the action of hyoscyamine when given by the mouth; but the following cases, that occurred to me while medical officer to an asylum, shook my belief considerably even in the certainty of its action when given hypodermically.

Case 1.—A strong robust young woman, æt. 23 years, suffering from melancholia, was admitted. Soon after admission she became violent, destructive and unmanageable. As I had, in former cases, used hyoscyamine with good effect, recourse was had to it here. At 6:45 P. M. one-twentieth of a grain was injected. At 8. P. M. the nurse came for me, desiring me to see the patient at once. I did so, and found her lying on the floor perfectly helpless; the pupils widely dilated, insensible alike to light and touch; the pulse feeble, irregular and not easily detected. The face wore a dusky tinge, while there was occa-

sionally slight puffing of the cheeks on expiration. A convulsive twitch now and then affected the muscles of the angles of the mouth, sometimes the eyelids, and at other times an arm or leg, and occasionally the muscles of the neck; there was also coldness of the limbs. The temperature was not taken. Accompanying these grave symptoms were dryness of the throat, and inability to protrude the tongue. Brandy was at once administered, while stimulants and warmth were applied to the surface of the body. In about an hour the pulse gradually became more perceptible and regular, the breathing more normal, yet a little heavy and prolonged. She began to move her hands about before her, seemingly weaving some imaginary thread, and rubbing her eyes as though but half awake, and wishing to rouse herself. She did not speak; nor could she, from the perfectly prostrate and powerless condition of her limbs, rise when told, although it was quite apparent she understood what was said to her, and quite willing to get up if she had been able. By 10:30 P. M. she was out of danger, and slept quietly the whole night, there was no further destructive and noisy mania, and in course of time she was discharged cured.

Case 2.—In a married woman æt. 45 years, suffering from mania, one-twentieth of a grain produced, for a time, a most quieting effect, which lasted for two or three days. By-and-bye the dose lost its influence, and one-fifteenth of a grain was tried with the desired result. One night in which she was particularly noisy and destructive, the usual injection of one-fifteenth of a grain was given, and she was then put to bed, the night-nurse keeping a watch over her. Two hours after the injection, on the pretence of feeling very ill, she enticed the nurse into the padded room and nearly strangled her. Another injection of one-fifteenth of a grain was given, and, soon afterwards this woman reached much the same degree of collapse as noted in Case 1, needing the prompt application of the same remedies.

Finally, the drug was discarded as one too dangerous to be used. My experience of it, which extended over three months, using it frequently, was not to favorably impress me with either its utility or its certain action. It was never found to do more than quiet the patient, and had to be periodically given when a fresh outburst of violence occurred; it did not stop, nor tend to stop, the frequency of the attacks; it merely acted for the time being—a result that can be perfectly well attained by other more trustworthy and less dangerous drugs. In some cases the physiological effects were produced by small doses, even one-fortieth of a grain; in others, not until one-fourth of a grain was used.—W. J. Simpson, M. D., in *British Medical Journal*, Dec. 9, 1882.

A Cure for Intractable Chronic Cystitis, and Confirmed Prostatic Retention of Urine.—In the British Medical Journal, Dec. 9, 1882, Sir Henry Thompson says: "I have long been anxious to discover a means of affording some permanent relief to those who suffer with severe and long-standing prostatic diseases. I refer to a condition in which the patient, having for several years relied entirely on the use of a catheter for the removal of all his urine, finds the bladder becoming so intolerant of its contents, that the act of catheterism, at first perhaps employed but three or four times in twenty-four hours, must now be repeated, under penalty of unendurable torture, at least every hour or hour and a half. His time is indeed chiefly spent, both by day and night, partly in suffering from retained urine, and partly from painful catheterism for the sake of the temporary relief which it affords."

It is in these cases that he recommends the suspension of all action on the part of the bladder for a few days only, and to prevent any accumulation of urine within the organ, and thus allay the constant and painful want to pass urine. Abolish catheterism altogether, with its irritating effect upon the urethra: we might then hope that the inflammation of the bladder will subside and its tolerance of urine considerably increase.

In order to do this, he has recourse to the following proceeding: "First, placing the patient in the lithotomy position, under ether, I pass a grooved median staff into the bladder, and make, from the raphe of the perineum, a small vertical incision just above the anus, large enough only to admit the index finger—the incision to terminate in the staff at the membranous portion of the urethra, which should be divided for half an inch at most, so as to admit the finger to traverse the canal to the neck of the bladder. Then, having withdrawn the staff, I insert a large vulcanized catheter or tube, say about No. 20 (English scale), with its extremity just within the bladder, fastening it there by a tape to a bandage round the waist; the tube to be retained as a channel for the urine, for several days at least." Sir Henry has now performed this operation in ten cases, and with very gratifying results; he attributes the benefit to a temporary suspension of function in both the bladder and the urethra; in the bladder as a containing viscus, in the urethra as a channel or transmitting one. By means of the tube the urine leaves the body almost direct from the ureters, while the bladder and the urethra, being in a state of perfect quiescence, cease almost immediately to be inflamed; all muco-pus disappears, and the urine is discharged in as healthy condition as it leaves the kidneys. He removes the catheter on the tenth to twentieth day, and allows the wound to heal.—*Med. and Surg. Reporter*, January, 1883.

Vomiting of Pregnancy.—Professor Horwitz, of St. Petersburg, has recently issued a monograph on this subject, which has received a lengthy notice in the Medical Press and Circular, from which we take the following remarks on treatment: The legion of drugs recommended is the best proof of their worthlessness—alkalies, alkaline waters, bismuth, laudanum, cerii oxalas, sinapisms, blisters, chloroform or ether spray over epigastrium and back, ice-pills, iodide of potassium, bromide of potassium nitrate of silver, electricity, etc. Besides this, they can only be employed in the early stages of the affection. Professor Horwitz recommends absolute rest in the horizontal posture, and in a darkened room; the diet to be nourishing and carefully regulated. Nutrient enemata are counseled under the following regulations:

1. One or two hours before their employment the colon should be washed out with warm water.
2. Only small quantities should be injected at once (about three ounces at a time).
3. Frequent repetitions of them should be avoided, in order that irritation may not be set up.
4. In case of great prostration, two or three spoonfuls of good wine (sherry or port) should be added.
5. In those cases in which enemata are not retained, a few drops of tincture of opium should be added.

He considers the "gynecological" treatment as of great importance. Should there be inflammation, depletion will be useful. Scarification is recommended rather than leeches. Nitrate of silver to the portio vaginalis he does not consider very useful, and on this point he differs from Prof. C. Braun, of Vienna. Mayer's method of repression, by means of laminaria, he recommends. He has twice employed Copeman's method without effect. He looks upon artificial abortion as the only resort in some cases, and speaks of it as follows: In a case of uncontrollable vomiting, in which all means of treatment have been employed in vain, while the disease grows gradually worse and threatens the life of the patient, then the only "chance" of saving her is the interruption of the pregnancy, *i. e.*, artificial abortion must be induced; and, indeed, naturally, in view of the clinical symptoms, and of the height of the danger, the timelier this is done the more rational is the doing of it. Artificial abortion is thus carried out: After preparation of the genital organs by carbolized injections and

dilatation of the cervix, he separates the ovum from the uterine walls by means of the uterine sound. He only ruptures the membranes when the process of abortion is delayed. In eight cases in which he has practiced this method he has never seen portions of the placenta retained, while the loss of blood has been but slight, in fact, less than in spontaneous abortion. Transfusion he looks upon as an open question.—*Med. and Surg. Reporter*, January, 1883.

Local Treatment of Erysipelas.—This subject deserves every attention, and the readers of the British Medical Journal ought to be thankful that it has been so often discussed. But the question of etiology is, perhaps, not always clearly grasped, although it must determine to a large extent the type of the disease, and its successful management. Take erysipelas of the scalp, for instance: a superficial erysipelas is a very innocent thing, and easily controlled; but there is hardly a more dangerous malady than traumatic erysipelas of this part, accompanying profuse suppuration in the connective tissue between the occipito-frontalis muscle and the cranium.* Again, if the sanitary arrangements of a private house or of a large public institution be defective, there may be frequent epidemics of facial erysipelas and of enteric fever, either separately or conjointly, as happened in the Somerset Lunatic Asylum in 1879 and 1881 (British Medical Journal, October 29th, 1881).

But if surgical and hygienic agencies can be safely put aside, it may be acknowledged that the local treatment of erysipelas deserves a large amount of professional care and discrimination. Call it by what name we like, it is essentially a spreading dermatitis, which may cause peril by the extent of cutaneous surface involved, or by the degree of constitutional irritation which may be provoked. It is not often that we have a quasi-inflammation so completely under therapeutic command. Iodine may be useful if there be any suspicion of a pyæmic complication; but, for the so-called idiopathic erysipelas, I cannot speak too highly of the free and frequent application of a solution of tannin in equal parts of spirits of wine and water, as recommended by Dr. Braithwaite in the Journal for April 30th, 1881. This solution is quite as beneficial when erythema approaches erysipelas in local and general severity.

I give the bare outlines of two cases: 1. A lady, a little past middle age, had a sudden attack of erysipelas all over the left thigh and leg, after a trivial injury. The general health was tolerably good. About a dozen "paintings" with a solution of tannin were sufficient to drive away every trace of the disease, the swollen skin soon presenting a shrivelled look. 2. A maiden lady in middle life, entrusted to my care by Mr. Clouting of Thetford, suffered from erratic erysipelas on the face, after exposure to cold, in October, 1881. The tannin solution was very successful, and a recent letter from Mr. Clouting tells me that the lotion has been frequently used during the last twelvemonth with the same good result.

Tannin completely dissolves in equal parts of water and spirits of wine; and, when applied to the skin with a camel's hair brush, a delightfully cool feeling follows from evaporation. A proper strength is six grains to the drachm of fluid.

One of the great literary wants of our profession is, a first-rate monograph on erysipelas in its medical and surgical aspects. Just because it has these two aspects, the subject has rather "fallen between two stools," although handled with more or less ability in various dictionaries and encyclopædias. But there are several points in its pathology and treatment on which most medical men would like to have new and trustworthy teaching.—John Kent Spender, M. D., in *British Medical Journal*, Dec. 9, 1882.

*See an excellent lecture by Mr. Erichsen on this point, Lancet, January 26th, 1878.

Ipecacuanha.—Ipecacuanha was introduced to the profession in 1649, by Piso, as a specific for dysentery. In 1823 Chapman wrote, "For fifty years it has been celebrated in all parts of the world as a specific for dysentery." In 1775 Shaw, in a note in his edition of Sydenham, says, "Ipecac is a specific for dysentery."

The celebrated Helvetius being in Paris when the Dauphin, son of Louis XIV, lay sick of a dysentery, and having some of this root with him, with a full knowledge of its virtues, offered it to the physician of the king, who used it to the rapid cure of the heir to the throne. The mortality from acute dysentery in Southern India, under mercurial treatment was 7.1 per cent. Under the general introduction of ipecac in full doses it fell to 1.3. Dr. John Estin Cooke, of Kentucky, in his essay on autumnal diseases says: "Dysentery is another form of autumnal fever, to be treated in every point as such a fever. Up to the year 1816 I never met with any difficulty in treating dysentery with ipecac alone, but in the epidemic of that year gastric irritability was so persistent as to force the abandonment of it for a while. The ipecac treatment had been laid aside for some, time when I was requested to visit a young negro. He had taken oil, etc., for several days, without relief. As I rode up his groans were distinctly heard at some distance. I immediately gave ten grains in a little water, and with such effect as I can never forget. In five or ten minutes he was perfectly easy. Three doses of ten grains each were left for him, to be taken, one at night, dawn, and at noon, and if at any time he should feel more pain, etc., to take one immediately. During the third day he got seventy grains divided into three doses, the object being to give as much as could be retained; the fourth day four doses of twenty grains; the fifth, six doses; the eighth, six, of twenty-five grains. The medicine operated freely every day, discharging deep green matter, and the patient recovered."

This was the beginning of ipecac, and it is curious to observe how the idea of Piso, as to the dose and capabilities of the drug, have been copied by medical writers for two hundred and thirty-three years. The root, unfortunately, I think, was also an emetic, and when everything was sympathy, and the stomach the center of sympathies, the emetic quality of the root took the bit into its teeth and ran away from and covered with dust its divine power of jugulating that concentration of agonies conventionally denominated dysenteria.—Prof. Bowling in *The Southern Practitioner*.

The Treatment of Dropsy.—Dr. Leech, in a paper read at the last annual meeting of the British Medical Association (London Medical Record, December 15, 1882), discusses the treatment of cardiac, hepatic and renal dropsy. Firstly, as to the advisability of removing the fluid either by mechanical means or by the eliminants of water, such as diaphoretics, diuretics and purgatives: every case has to be considered as to the real cause of the dropsy, the stage it has reached, and the condition of the patient and his tissues. For without this the mere routine treatment by eliminants of water may not only not do any good, but actual harm may result. Thus, in the earlier stages of heart-disease with anasarca, diuretics may succeed admirably. Later on, as the general health fails, they lose their power, even though there be no evidence of increasing obstruction of the circulation. And at last it may happen that we cannot drain the water from the œdematous tissues, even when they are pricked or tapped. Secondly, as to the modes of elimination: of these, speaking of paracentesis, Dr. Leech believes that, when dropsy is due to a block in the portal vein, tapping is almost necessarily followed by a recurrence; in acute cirrhosis, when the distention causes great discomfort to the patient, this operation does not give even temporary relief, nor has he seen any good result from it in advanced

cases of ascites due to cirrhosis, where symptoms of coma had developed. Diuretics rank next to paracentesis, but they can only act when the kidney is functionally competent, and when the tissues are in such a condition as to be able to give up their water. In hepatic dropsy, copaiba, which can be given for a long time with advantage, and caffein are most useful. Digitalis and saline diuretics in cardiac, and diaphoretics are of most value in renal, dropsy.—*Medical Record*, Jan. 20, 1883.

On the Therapeutic Value of Sulphurous Acid in Scarlatina Maligna.—Dr. Keith Norman Macdonald, after denying the prevalent opinion, that no reliance can be placed on any drug in cases of scarlatina, does not hesitate in affirming that, when properly applied, both locally and internally, sulphurous acid is by far the most efficacious remedy we possess. He continues: "I have had several opportunities of testing its efficacy in some of the worst cases I have ever seen, during the epidemic which has been rife in this town (Cupar Fife) for the last two months, and I am bound to say that, of all remedial measures in this disease, it is, in my opinion, the most reliable. My treatment is as follows: The moment the throat begins to become affected, I administer to a child, say of about six years of age, ten minims of the sulphurous acid, with a small quantity of glycerine in water, every two hours, and I direct the sulphurous acid spray to be applied every three hours to the fauces for a few minutes at a time, by using the pure acid, in severe cases, or equal parts of the acid and water, according to the severity of the case. Sulphur should also be burned in the sick chamber half a dozen times a day, by placing flour of sulphur upon a red-hot cinder, and diffusing the sulphurous acid vapor through the room, until the atmosphere begins to become unpleasant to breathe.

"In the worst cases, where medicine cannot be swallowed, this and the spray must be entirely relied upon; and the dark shades which collect upon the teeth and lips should be frequently laved with a solution of the liquor potass. permanganatis of the strength of about one drachm to six ounces of water, some of which should be swallowed if possible.

"In cases presenting a diphtheritic character, the tincture of perchloride of iron should be administered in rather large doses in a separate mixture with chlorate of potash, and equal parts of the same with glycerine should be applied locally, with a camel's hair brush several times in the day; but, as in the majority of cases among children, it is next to impossible to use a local application more than once; the spray and permanganate solution will then prove of great service.

"As to other remedies recommended by various authors, ammonia is nasty, and cannot be taken well by children; carbolic acid has the same fault, and cannot be applied properly. Gargles are also useless in children, because they seldom reach the diseased surfaces, and warm baths and wet sheet packing are dangerous, because they are never carried out properly in private practice. The hypodermic injection of pilocarpine is a remedy that may give good results hereafter, but I have had no experience of its use."—*British Medical Journal.*

Vomiting in Phthisis.—To relieve this symptom, Dr. Woillez painted the pharynx with a solution of bromide of potassium, and found it very useful. A pencil of charpie dipped into a solution of pure bromine in two thirds of water was passed rapidly into the pharynx before meals, the patient being required to abstain from expectoration after as long as possible. In several cases the vomiting was arrested by the first application, while in others the action, though less immediate, was beneficial.—*Journal de Thérapeutique.*

New Remedies.

Convallaria Majalis in Heart Disease.—The common lily of the valley (*convallaria majalis*) has recently been introduced as a diuretic and remedy for certain forms of heart disease. It has hitherto been more generally valued for its poetical associations, and its delicate beauty and its fragrance, than for its medicinal properties, but even in ancient times it was used as a curative agent, and was employed in the treatment of wounds, bruises, worms, intermittent fever and epilepsy. By Culpepper it was regarded as a sovereign remedy for "a weak memory," and he tells us that the spirit of the flowers distilled in wine will restore lost speech. He adds that "it is exceeding good in apoplexy," and that it comforteth the heart and vital spirit. Gerarde recommends that the flowers should be placed in a glass, and put in an ant-hill, when after a month a liquor will exude, "which being outwardly applied, helps the gout." It is well known that from time immemorial the peasants of Eastern Europe have regarded the lily of the valley as a certain remedy for dropsy. In 1880, two Russian physicians, Troitzky and Bogojavlensky, investigated its action, and published several cases showing its value in the treatment of various forms of cardiac disease. These statements were for the most part confirmed by Professor Botkin, of St. Petersburg. Still more recently, the subject has been systematically studied by Professor Germain Sée, at the Hotel Dieu Paris, and the results of his experiments and observations are given in the Bulletin Général de Thérapeutique, July 30, 1882.

The active principle of convallaria has long been known. In 1858, Walz succeeded in isolating two glucosides, which he named "convallarin" and "convallamarin." Their chemical properties were investigated by Tanret and others, whilst Marmé published a paper on their physiological action. It was found that convallarin possesses purgative properties only, whilst convallamarin is a heart poison allied to digitalin, helleborin and the upas principles. Stanislas Martin is supposed to have discovered in the fresh flowers an alkaloid, which he named "maialine," but other investigators have failed to detect it in the leaves, stem or root. The preparations commonly employed are the aqueous extract of the leaves, the aqueous extract of the flowers, and the extract of the whole plant. A watery infusion of the leaves and flowers is sometimes recommended, but to obtain the full therapeutic effect it is better to use an extract of the whole plant. A reliable preparation is made by Parke, Davis & Co., of Detroit.

A drop of the extract of the flowers, injected under the skin or applied topically to the frog's heart, arrests it in systole, in much the same way as digitalis, upas antiar, erythrophleum and some other remedies. In the case of a dog, four drops of this extract, injected into a vein, caused death in ten minutes by arresting the heart's action. It appears that the heart is first slowed, and the respirations are quickened; then the heart's action becomes irregular, and the pulsations are weak and very rapid; the blood-pressure is first increased, and is then lowered; the respirations become slower and slower; the heart ceases to beat; the pressure falls to zero, and the respiratory movements cease. The excito-motor power of the nerves is unaffected, and the excitability of the pneumogastric is weakened, although not abolished.

Professor Sée has published details of twenty cases, in which the effects of convallaria were carefully noted. Five were cases of mitral insufficiency, characterized by want of rhythm, œdema of the lower extremities, dyspnœa and other symptoms. The extract was given in doses of from half a gramme to a gramme daily, and in each case the benefit was most marked; the heart's action became stronger and more regular, the breathing improved, and there was a notable increase in the amount of urine passed.

The sixth case was one of mitral constriction, which was immediately benefited, there being a speedy improvement in the pulse, with increase of urine and decrease of the œdema. Several cases of aortic insufficiency were relieved of the more distressing symptoms.

Dr. Sée considers that convallaria majalis constitutes one of our most important cardiac remedies. It produces on the heart, blood vessels, and respiratory organs, effects constant and constantly favorable; to wit, slowing of the beatings of the heart, with often a restoration of the normal rhythm; and, on the other hand, augmentation of the energy of the heart and of the blood-pressure. Dr. E. P. Hurd has published a remarkable case of Corrigan's disease, in which the fluid extract prepared by Parke, Davis & Co. proved most beneficial, given in five drop doses every four hours.

The therapeutical indications for the employment of convallaria are beginning to be generally recognized. It is useful in palpitation resulting from exhaustion of the pneumogastrics; in simple cardiac arythmi, with or without hypertrophy, and with or without valvular lesion; and in mitral constriction, with absence of compensation in the left auricle and right ventricle. It may be given with advantage in mitral insufficiency, especially when there is pulmonary congestion with resulting dyspnœa. In Corrigan's disease, the peripheral arterial pulsations disappear, and respiration becomes markedly restored. In dilatation of the heart, with or without hypertrophy, convallaria is decidedly indicated. In cardiac dyspnœa, it is inferior to morphia or iodide of potassium; but, in some forms of asthma, it is said to be useful.

Convallaria exerts no deleterious effects, and may be given with perfect safety. Dr. D'Ary says: "With me, it has long since taken the place of digitalis; and in cases of organic heart disease, when, in the latter stages, the symptoms are becoming urgent, and the patient anxiously begs for relief, the physician will appreciate a remedy that will relieve signally and promptly, without the dread of overdose and cumulative action." At the present moment, convallaria is difficult to obtain; but in a few months there will be an ample supply.—*Brit. Med. Jour.*, Feb. 24, 1883.

New Remedy for Syphilis.—Prof. Liebreich brought forward, at the last meeting but one of the Berlin Medical Society, a new drug for the treatment of syphilis by the subcutaneous method. This drug rejoices in the name of hydrargyrum formidatum, and is, therefore, merely a different form of the old cure for syphilis. The mode of its preparation was not stated; chemically, it belongs to the amide group, in whose structure the monovalent amidogen (NH_2) plays an important part. Liebreich was led to think of this new preparation from the notion that the ordinary amides of the body, of which urea may be regarded as the principal one, pass out of the organism in an undecomposed state; when, however, an amide is in combination with a metal, decomposition readily occurs, and the metal is reduced and deposited. Liebreich repeated his experiments before the society, and showed that these conjectures were quite true for the metal mercury. It is supposed, therefore, that the formamine of mercury, after the hypodermic injection, undergoes disintegration; and so the mercury is set free and is able to exert its well-known power over the lesions of syphilis. The preparation is easily soluble in water, is of neutral reaction, does not coagulate albumen, is not precipitated by caustic soda, and the presence of mercury can be demonstrated by means of sulphide of potassium. The drug, when injected under the skin, produces its effects very surely and rapidly. This is not regarded as a disadvantage, for the medicine is said to be easily borne, and has never produced salivation in Liebreich's hands. There is very little pain attendant on the injection, which has never excited any inflammation. From a half to a whole of a Pravaz syringeful (a 1 per cent. watery solution) may be injected twice or thrice daily. Liebreich looks on the preparation as the best we yet have for subcutaneous injection.—*Medical Times and Gazette*, Jan. 6, 1883.

Convallaria Majalis.—The Other Side.—Dr. B. Stiller, in the Wiener Medizinische Wochenschrift, adds his experience to the observations on convallaria majalis, which, it will be seen, is of different tenor from that of the Russians, who introduced it, and of M. Germain-Sée, who first made it prominent.

Seventeen persons were treated by Stiller, some for relapses, making a total of twenty-one cases, fifteen of whom were males; the ages varied from eleven to seventy years, and the diseases were four cases of mitral insufficiency with aortic regurgitation, one of pure mitral regurgitation, five of regurgitant and stenotic mitral disease, four of mitral stenosis, five of weak heart with dilated left ventricle, and, lastly, two cases of Graves' disease, altogether a motley group of cardiac diseases. Out of the twenty-one cases seventeen gave absolutely negative results with convallaria; there was not the least influence on the frequency or rhythm of the heart's action. Some of these cases proving intractable to convallaria were subsequently benefited by digitalis; two individuals experienced a certain degree of the diuretic effect of the new drug without any of the other vaunted phenomena, not even the dropsy being diminished; two patients underwent decided improvement in most of the cardiac symptoms during the use of the new medicine, but these cannot outweigh the large balance of negative results.—*Gaillard's Medical Journal*, March 10, 1883.

Blood Diet.—As the result of five years' experience at the Royal Hospital for Children and Women, Dr. Ed. O. Day gives, in the Lancet, the following mode of preparing blood as a diet for delicate children:—

A given quantity of blood is collected, and before coagulation takes place, is mixed with three parts of water, and kept in constant movement for some time, then gradually evaporated over a water bath, at a temperature not exceeding 100° F. Very great care has to be taken to prevent coagulation. When the consistence of chocolate in reached, a higher temperature may be used, to perfect drying. It should be reduced to a powder in a mortar. It is like coffee, with very little taste, but with a peculiar odor. If properly prepared it should be perfectly soluble in water. He commences, for a child one year old, with a teaspoonful during the day.—*Medical and Surgical Reporter.*

Berberis Aquifolium.—Mr. Henry B. Parsons has written in the Report of the United States Commissioner of Agriculture for 1880, an article upon the above drug, used to some extent in the west, chiefly as a tonic and febrifuge. Its alkaloids are berberine and oxyacanthine, the same as those of common barberry-root, and there is no reason to expect any more from the new than from the older species of berberis. There are also starch, wax, gum, sugar, resin, and a "black substance," but none of these are of therapeutic value. There is no need of any new source of berberine, which is an alkaloid, the bitterness of whose salts is out of proportion to their tonic qualities.—*Boston Medical and Surgical Journal*, March, 1883.

Eucalyptus in Baldness.—A California physician claims that the juice from eucalyptus leaves has induced the hair to grow on his bald head. He was in the habit of pounding to a pulp the leaves, which he applied to his head for the cure of headache, and was surprised to find a new and abundant crop of hair commence to grow.—*Druggist.*